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AN ILLUSTRATED QUARTERLY MAGAZINE DEVOTED TO THE STUDY OF BIRDS IN THE FIELD

Edited by **LYNDS JONES**

OFFICIAL ORGAN OF THE WILSON ORNITHOLOGICAL CHAPTER OF THE AGASSIZ ASSOCIATION

OLD SERIES, VOLUME XI **NEW SERIES, VOLUME VI**

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BACHMAN'S SPARROW (*PEUCÆA ÆSTIVALIS BACHMANII*) IN VIRGINIA.

In advance of a publication with colored plate, which will appear next summer—as I desire another season of observation upon the species—, I shall now devote a few lines to my most interesting of bird records. About the middle of May, 1897, while working my way through Dogwoods to a clearing on the slope of a hill along Blackwater Creek, in Campbell Co., in southeastern Virginia, I came upon the first specimen of Bachman's Sparrow, *Peucæa æstivalis bachmanii*, ever taken in Virginia. I was just emerging from the Dogwood bushes, (*Cornicus florida*) and was yet in the margin of the thicket when my attention was attracted by a small, brownish bird stealthily moving through the grass just on the thicket's outskirts. Thinking it a Song Sparrow, I raised my gun, as I have never found that species nesting in this portion of the state, and my friend, Mr. William Palmer, had repeatedly requested me to find out whether it nested there, when it flew and disappeared farther down the hill. I followed the direction it had taken and soon found it again. On close scrutiny with my glasses I found it was a new bird to me, and I began to watch it very closely, concealing myself behind a burnt pine stump. Soon the bird became restless and ran through the grass till it disappeared again, this time in a suspicious looking grass tuft a few feet from where I stood. I approached the tuft and not till I nearly touched it did the bird leave. Then it slid off its nest and ran down the hill. On pulling the grass of the tuft aside a somewhat domed structure of dried grasses was disclosed, and upon looking in the hole on the nest's side, I saw, much to my surprise, five white eggs, which proved later to be in an advanced stage of incubation. The other bird came around and both were secured for perfect identification. I knew when I saw the eggs the species was *bachmanii*, but I knew not then the real importance of my "take" until I made it known to Mr. Wm. Palmer, who informed me of the novel record.

Owing to typhoid fever, which came near ending me on a collecting trip "across the Great Divide," I didn't get a chance to visit the locality the past season, but next season my brother will investigate matters for me and I shall then write a pamphlet giving a more detailed account of the nesting of the species in Virginia. Then I shall also get a series of

the nesting birds for comparison, as the birds themselves, aside from their new record, may be specialized. Only one other bird of this species has been taken so far north. This was secured by Mr. Figgitt, in Maryland. My record was announced by Mr. William Palmer, in *The Auk**, as also, I believe, Mr. Figgitt's was. Mr. Palmer thinks the bird will be found abundantly in eastern Virginia. The nature of the ground where the nest was found was very red and dry, and the trees are Scrub Oaks, Old Field Pine and Dogwood.

Jno. W. Daniel, Jr., *1st Lieutenant, U. S. V.,*
Lynchburg, Va.

THE LORAIN COUNTY, OHIO, 1898 HORIZON.

Considerable has already appeared in the Bulletin on the birds of Lorain County, in furtherance of the plan suggested by your committee on Geographical Distribution. It seems only fitting to round out that work, at the close of the year, by making a full report of what has been accomplished. It should be said at the outset that the work here reported has been carried on by Mr. W. L. Dawson and the writer more or less jointly, at least as much so as it would be possible for two persons to work together without making a business of it.

During the year eighty-seven excursions were made more or less out of town into the woods and fields for the purpose of observation and study of the birds. Of these only seventeen were trips to the more distant parts of the county, occupying the whole day in the majority of cases. Five of these long trips were made in company with a considerable number of students as class excursions. Of the seventy short trips, thirty-seven were with the Ornithology class, leaving forty-five short trips independent of the class. These trips with the class would not ordinarily be considered equal in importance to the others, but at such times a careful record was kept and often unusual species noticed. It seems necessary, therefore, to include them as a part of the whole work of the year.

Rather more than half of the seventy short trips were devoted to early morning work and were therefore of short duration—never more than three hours, and often half that. But the early morning is the best time for the study of birds. Some few were half day trips to neighboring

*Vol. XIV, p. 322.

fields and woods with a view to making a careful search for the more uncommon species.

While the work varied somewhat with the months, yet enough was done in each month of the year to make a fairly complete record. April, May and June have forty-seven trips credited to them, a large proportion of them being trips with the class. Nearly all of the class work was done in these three months, of necessity. A little was carried into July.

It must not be supposed that the whole work of the year was confined to the trips enumerated. Many valuable records were made during walks to and from work and during a few minutes on the college campus when the warblers were unusually numerous. At least two records were made in Mr. Dawson's door-yard which were not duplicated during the year. Mr. Dawson's weekly appointments at a neighboring country village afforded excellent opportunities for observation. Were these trips counted with the others the number would aggregate more than a hundred for the year.

The whole number of species recorded for the county during 1898 is 175, there being but twenty which were not seen by both of us. The whole number of species recorded for the county in twenty years is 221. Of this number thirty-nine are casual and accidental, leaving but seven species which might reasonably be expected which we did not see. Of these seven four are irregular in their occurrence. On the other hand, twelve species now considered rare were recorded. These twelve are: Horned Grebe, Greater Yellow-legs, Baird's and Red-backed Sandpipers, Golden Eagle, Barn Owl, Short-eared Owl, Lincoln's Sparrow, Pine Warbler, Mourning Warbler, Bewick's Wren and Gray-cheeked Thrush. Bewick's Wren is the only species new to the county list.

So much for details. What results, beyond the strengthening of the county list, can we show for the twelve-month of labor? Four species were added to the writer's list and seven to Mr. Dawson's. Several little known species have been better learned and the songs of those and others heard for the first time. The conviction that usually aimless walks purely for exercise can be turned to pleasurable and profitable account deepened. Better health resulting from a definite plan for every half holiday as well as every whole holiday for open air work with the birds, bringing more and better exercise than any unplanned ramble could. Assurance made doubly sure that birds are creatures of all weathers, and that they are more easily approached and many of their habits better studied during stormy than during fair weather. An aroused public sentiment in favor of the birds among both citizens and

students, resulting in far better protection of our native birds. A clearer conception of the relations existing between the migrations of the birds and other natural phenomena. In short, it has been a year full of profit.

LYNDS JONES, *Oberlin, Ohio.*

A SHORTEST-DAY-OF-THE-YEAR HORIZON.

December 22nd of this winter completed in this locality a week of south winds and thawing weather. The snow having vanished, except for fence-row drifts, the walking was very heavy in most places. Occasional spatters of rain all day long, detracted only a little from the pleasures of a tramp which Professor Jones and I made to lake Erie, via Chance creek. The course to be traversed called for twenty-one miles on foot with a return in the evening "on the electrics."

The Professor had set his heart on finding a Red-breasted Nuthatch in the Chance creek gorge—and so we did, just one, in company with W. B's. (as we called the White-breasted Nuthatches, for short) and Brown Creepers. He was evidently established for the winter and right glad we were to find him; for this is the first winter record for the county.

While we were beating through a copse near the top of the bank I was suddenly rooted to the spot by that sweetest note in any language, "*Cheery, cheery!*" When I could recover my breath I shouted, "Jones, there's a Bluebird!" And immediately from the top of a tree, hard by, there floated down the delicious strains of a Bluebird's spring song. Scarcely could I restain the impulse to fall on my knees, so like a heavenly messenger it seemed. It was indeed a Bluebird, dropped down out of the sky on the shortest day of winter. The first note we heard a little to the north of us, while the bird was on the wing, and he passed off into the murky south, flying high. It was perhaps a laggard from the north; but if this be true, its song was all the more remarkable, for it sang incessantly during the minute it stayed upon the tree. On the other hand, it might have been lured north by the mild weather, but struck with sudden misgiving at sight of the chilly lake a few miles further on. At any rate we respectfully submit it as either the latest "fall" or earliest "spring" record for this vicinity.

Red-headed Woodpeckers appeared in another wood some three miles south of the lake. I say "another" because we had already found

seventeen individuals this winter, in a wood just out of Oberlin. It is altogether inexplicable why they should have chosen this particular season in which to brave the climate, for the winter came on with early and unmistakable warning.

The following birds comprise the day's horizon—twenty-two species in all :

Bob-whites.
Sparrow Hawk.
Pigeon Hawk.
Barred Owl.
Hairy Woodpeckers.
Downy Woodpeckers.
Red-headed Woodpeckers.
Red-bellied Woodpeckers.
Flickers.
Crows, 3.
Blue Jays, 20.
Bald Eagles.
Horned Larks, 6.
Goldfinches.
Song Sparrows.
Tree Sparrows.
Tufted Titmice.
White-breasted Nuthatches.
Red-breasted Nuthatch.
Chickadees.
Brown Creepers.
Bluebird.

W. L. Dawson, *Oberlin, Ohio.*

DECEMBER HORIZONS.

GLEN ELLYN, ILLINOIS.

Northern Shrike.—Not infrequently seen during the month.

Tree Sparrow.—Not uncommon in the woods.

Downy Woodpecker.—Met with in woods.

Hairy Woodpecker.—Met with in woods.

American Rough-legged Hawk.—Seen several times soaring overhead.

White-breasted Nuthatch.—Not uncommon.

American Crow.—December 11. 108 Crows in two battalions of about fifty birds each going north-west at 3:15 P. M. This latter, however, is an every day occurrence during the winter roosting season of the Crow. In the early forenoon they pass over the village in a south-easterly direction, but in smaller companies, of from four to six individuals and upwards, and even single birds. There is said to be a small roost east of Elgin, fifteen miles north-west from here.

Blue Jay.—Always in evidence.

Horned Lark.—Occasionally seen in the fields.

Red-tailed Hawk.—December 12. One seen in the woods was probably this species.

Rusty Grackle.—December 18. One male at unfrozen water hole in the creek, or springs inlet.

Benj T. Gault, *Glen Ellyn, Ill.*

LORAIN COUNTY, OHIO.

In spite of the fact that winter set in very briskly and decidedly on November 25th, and that the cold endured for almost three weeks without cessation, the December horizon is unusually large this winter. The thirty-six species which compose it are given below in the order of their occurrence :

Dec. 3.—Blue Jay.
Flicker.
Golden-crowned Kinglet.
Hairy Woodpecker.
Song Sparrow.
Cedar-bird.
Junco.
Chickadee.
Tree Sparrow.
Downy Woodpecker.
Cardinal.
Goldfinch.
Red-headed Woodpecker.
Red-bellied Woodpecker.
White-breasted Nuthatch.
Am. Rough-legged Buzzard.
Screech Owl.
Long-eared Owl.
Tufted Titmouse.
Brown Creeper.
Dec. 5.—Horned Lark.
Dec. 8.—Sparrow Hawk.
Dec. 10.—Meadow Lark.
Bob-white.
Dec. 17.—Red-tailed Hawk.
Dec. 22.—Crow.
Red-breasted Nuthatch.
Bluebird.
Pigeon Hawk.
Barred Owl.
Bald Eagle.
Dec. 28.—Snowflake.
Lapland Longspur.
Prairie Horned Lark.
Red-shouldered Hawk.
Golden Eagle.

W. L. Dawson, *Oberlin, Ohio.*

MERIDIAN, DUNN COUNTY, WISCONSIN.

WINTER VISITANTS.

American Goshawk.—Twelve seen.

Golden Eagle.—One seen December 11.

Arctic Horned Owl.—One, nearly white, seen December 2 and 3. This is the only one observed in Wisconsin.

American Hawk Owl.—One taken December 10. The first seen in in five years.

Evening Grosbeak.—Abundant in all suitable places.

American Crossbill.—A flock of about twenty individuals as seen daily from December 2 to 10.

Redpoll.—Several small flocks seen during the month.

Snowflake.—Three small flocks seen. Less than usual.

Bohemian Waxwing.—About forty individuals visited the cedar trees in a neighbor's yard from November 28 to December 5.

Northern Shrike.—Three seen. A regular winter visitant in small numbers.

RESIDENT.

Bob-white.—Three small covies seen. Less than usual.

Ruffed Grouse.—Five observed. Less than usual.

Prairie Hen.—A covy of about thirty visited a corn field near by about every day. About as abundant as usual.

Barred Owl.—One seen December 19.

Great Horned Owl.—Eight observed.

Hairy Woodpecker.—Seen every day.

Downy Woodpecker.—Four seen. Rare in winter, common in summer.

Pileated Woodpecker.—Three seen December 19. Regular resident in small numbers.

Blue Jay.—Abundant everywhere.

American Goldfinch.—One small flock observed.

Brown Creeper.—Several observed.

White-breasted Nuthatch.—Abundant in all woodlands.

Chickadee.—Abundant. Associates with White-breasted Nuthatch and Downy Woodpecker.

J. N. Clark, *Meridian, Wis.*

GENERAL NOTES.

Philadelphia Vireo, *Vireo philadelphicus.*—I shot a fine plumaged female about 7:15 a. m., September 19, 1898. It flew from the clearing side into a young hickory tree—which stood out in the sweet fern, detached from the woods, and disappeared in the foliage, soon coming in

view as it searched for food, flying from branch to branch and running out to the tips in a sprightly fashion without the warbler-like nervousness. Since John Cassin took the type specimen near Philadelphia in September, 1842, but six others have been recorded in eastern Pennsylvania. Eight captures in fifty-six years and all of them autumnal!

FRANK L. BURNS, *Berwyn, Penna.*

A PISCIVOROUS YELLOW-LEG.—While walking through the central market of this place, the other day, my attention was attracted by something protruding from the bill of a specimen of *Totanus melanoleucus*. Upon closer inspection this proved to be a minnow. The bird's œsophagus was literally jamed full of top minnows, (*Fundulus diaphanus*). When I made this discovery my mind at once wandered back to a certain railroad bridge which spans the Iowa river about two miles south of Iowa City, Ia., and the wintery scene changed to one of May. Here on the bridge I sat again and watched the trim form of Yellow-leg chasing minnows. Yes, I am convinced it was minnows he was after. Many times have I been seated here and watched this bird, which is quite common along the Iowa river during migration, wade out into the shallow water of the bars, moving along slowly with tilting gate, suddenly lower that long head and neck and proceed to run through the water at a speed which would have done credit to a college sprinter, quickly striking to right and left with his bill. Of course I thought some luckless water beetle had met its doom, but now I am convinced that minnows and not beetles caused the vicious movement.

P. BARTSCH, *Smithsonian Institute, Washington, D. C.*

LATE DATE FOR CATBIRD.—Two acquaintances, reputable men on whose word I can rely, observed a Catbird, *Galeoscoptes carolinensis*, feeding upon the pokéberries of which there has been an abundant crop, at the west side of the Valley creek dam, Valley Forge, on the 1st day of December, 1898. It was easily approached and frequently uttered the unmistakable *mew* as it busied itself in and out of the bushes as only a Catbird or Wren can do. In spite of the deep snow and freezing weather it appeared plump and fluffy, and as far as they could observe, was without any physical defect whatever. It was seen on five different occasions during the day.

FRANK L. BURNS, *Berwyn, Penna.*

A "Bachelor" Great Blue Heron, *Ardea herodias.*—July 3, 1898, an adult was secured from the vicinity of a mill dam on the Darby creek, a mile and a half south of Berwyn, and brought to me to be mounted. It was an unusually large specimen, lacking but an inch of six feet in extent. Its diet must have been rather light for so immense a bird, as its stomach contained several dragon flies, and a few fragments of a crawfish and flesh of a frog. I failed to find any evidence of testes or ovaries and think it probable that it was sterile—doubtless a by no means rare condition for unmated, solitary and wandering birds and mammals. I was informed that this heron had been seen about for several days previous.

Frank L. Burns, *Berwyn, Penna.*

Chimney Swift Roost.—Perhaps they had used our east chimney as a sleeping place before this fall, but if so, I failed to observe it. Annually a brood of young have issued from this and another chimney for at least fifteen years except the season of 1895, when none appeared to occupy the flues. It is the ordinary type of brick chimney for a dwelling, the single flue or chamber being eight by fourteen inches and running from foundations to above the roof, a distance of about thirty-five feet, and is seldom used. On the evening of August 25th, I counted nineteen birds entering, which number made neither loss nor gain until the 31st, when thirty-one entered. The next evening—September 1—a further increase to thirty-seven which was the highest until the 7th and 8th—when the high water mark was reached—fifty-eight being counted. On the 7th, after a short rain storm at 6;50 P. M., the mercury stood at 68° F.—a fall of almost 20°—the sky overcast with lead-colored clouds and a brisk wind blowing. The Swifts were collecting at this time and circled about in a bewildering manner, now and then a few would rest for but a moment or so on the top branches of a tall locust, but in about ten minutes they began to drop in the chimney in singles, pairs or bunches of threes, until 6:48, when the last had disappeared. I noticed that if a bird followed too closely after a small number, it flew out and around again until room could be made for it or the previous arrivals could settle, while others would make a feint of entering for perhaps the same reason. The cool weather continued during the next day and night when the same number appeared, falling off to eighteen on the following evening, and none roosting there after the 17th, although a few were seen in the neighborhood up to the fifth of October.

Frank L. Burns, *Berwyn, Penna.*

FLICKER INVESTIGATION.

I take pleasure in announcing through the BULLETIN to the sixty ornithologists who have assisted me in the preparation of the Flicker Report, and to others who may be interested, that a definite time has been decided upon for its completion and publication. It will contain notes on the Scientific and Vernacular Synonyms, Geographical Distribution, Relative Abundance, Plumage, Hybridism, Albinism, Vernal Migration, Flight, Roosting, Song, Mating, Location, Position, Excavation, Composition and Dimension of Nest, Deposition, Measurements, Color and Shape of Eggs, Number of Eggs in Set, Season's Quota, Dates for Complete Sets, Incubation, Young in and out of Nest, Moulting, Food, Autumnal Migration, Destructive Agencies and Conclusions. It will be ready for the printer sometime in December of the present year. In the meantime I need migration notes for '95–'99, measurements of eggs with complete data, notes on incubation, young, and moulting.

I would be pleased to hear from and correspond with all who are willing to help me in this or anything else relating to the Flicker. Do not delay but write before it passes out of your mind.

FRANK L. BURNS, *Berwyn, Pa.*

PRELIMINARY ANNOUNCEMENT OF WORK FOR THE COMMITTEE ON VARIATION.

Now that winter is here and field work demands little attention, some time can be very profitably spent in getting acquainted with the material in our collections, which is generally apt to lie idle.

We have our specimens labelled and classified, but what does it all mean? Why have birds been grouped as they are and why is it that we are able to classify birds in such orderly fashion? The earlier ornithologists recognized in the resemblances and differences in the birds they found a natural arrangement in groups, but this work was simply to start out and make pigeon holes for the different forms; and most of us in our systematic work are simply finding these pigeon holes for our specimens.

With the development of the great theory of evolution the secrets back of all these conditions began to come forth. Species were now seen to have come from common ancestors and it was realized that they

had not always existed as we see them now. We realize now that Thrushes and Grebes belong to one great family and that their great differences are due to their early differentiations, whereas the various species of Warblers, for example, are only twigs of one branch of the bird limb. Recent work in classification has been guided more or less by this light, and yet it must be admitted that comparatively little attention has been given to a bird's family and ancestrial relationships. In other words, phylogenetic study of birds, as of other animals, is still a little explored field; and few subjects offer more opportunity than this for the thoughtful and resourceful student.

Some work along this line that I am doing in Harvard University has suggested to my mind the organization of a committee of members of the Chapter, who have opportunity and inclination for such work, to take up a careful study of the various races of North American Song Sparrows, from a phylogenetic standpoint. It is very desirable that we have the co-operation of as many ornithologists as possible and that the various life areas be represented as far as possible. First of all, as many skins as are accessible should be gathered together, and the following measurements made with great care with a pair of dividers.

Bill.—Length from nostril to tip. Depth at base where feathers begin.

Left wing.—Length of greatest chord.

Tail.—Length from knob or papilla or "bishop's row" to tip of tail.

It is desirable that all measurements be according to the metric system and that those of the bill should be accurate to tenths of millimeters.

Careful measurement of eggs are also desirable. After the work of measuring has been completed, a study of the color patches may be begun, and the following general principles should be borne in mind: *

I.—That young birds and females, in so far as they differ from adult males, are more primitive in coloring.

II.—That the color spread over the greater portion of male birds is the more generalized and the detailed markings the more specialized.

III.—Variations are found to occur more frequently in extremities.

Count the number of primaries and tail feathers; observing also any progression or correspondence in markings. If any variations are found, they should be noted. Notice whether females or young males of one race differ as much from those of another as the adult males.

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*Evolution of the Colors | of North American Land Birds | by | Charles A. Keeler. | San Francisco: | California Academy of Sciences. | January, 1893. | 361 pp. 19 plates. Very rich in suggestions.

Study the physical geography of the regions inhabited by the different races of Song Sparrows. Note differences in climate, due to temperature and humidity, also variations in altitude; and try to correlate them with the variations found in Song Sparrows.

It will be interesting to compare Song Sparrows with other species of Sparrows to see which are most closely allied and what characters are common. It is a good plan to attempt the construction of a Sparrow "tree." This may be largely a matter of guess work, but the attempt will help in obtaining a clearer conception of phylogenetic relationships.

R. M. Strong, *11 Mellen St., Cambridge, Mass.*

THE WORK FOR 1899.

This year, as heretofore, our work is naturally divided into two sorts: The more general study of the superficial features of bird life, often resulting in a glimpse into the inner life and thus throwing more or less light upon the many problems before us; and the more specialized work asked for by our committees. The general work requires less time and effort, and is often more entertaining to most of us. It certainly occupies a large place in present day bird study, and must always do so among those to whom it is merely a recreation or change from other activities and duties. It has its legitimate place and is certain to do great good.

The co-operation asked for by the committees on special investigations is work of the sort that must, from its nature, advance our knowledge of the birds materially if entered into with anything like heartiness by even a few. This is what we are organized for. It is for this purpose that our Chapter has continued these ten years to agitate the question of co-operative study among ornithologists everywhere. It is not too much to say that if every member would devote even what little time he may have at his disposal to the study of the Flicker, during the next six months, and make a report of that study to Mr. Burns in August, more would be known about that species than has ever been written. So it is with any subject upon which information has been asked. It seems difficult for us to understand that in this, as in everything else, it is the *little* things that count. The value of such reports lies in the range of comparison that is made possible by the work of individuals. It is not so much new things that are wanted as it is old things carefully studied and restated. Here a slight change and there a slight change made

necessary by a larger amount of material from the same or a greater range of country may change the whole aspect of the subject under discussion. We are not near the sunset of bird study, but rather scarcely yet behold the dawn.

The new committee on Variation, under the direction of President Strong, opens a wide range in the way of comparisons, and should bring the solution to some of the vexed questions in the classification of the lower groups. It will open new vistas in bird study to him who seriously enters upon the plan outlined by Mr. Strong.

The work on Geographical Distribution is one which can profitably be pursued every day, or during every outing of however limited time. It is a work full of profit and pleasure which will be one of the bright spots in the recollections of after years. He who does none of this sort of field study misses much of the pleasure of life.

The Migrations, Nesting, Song and Food of the Warblers are subjects that never grow old. There is room for years of work in each of them. There is no group of birds which yields larger profits for the effort spent in study than the Warblers. They will bear the closest acquaintance and always grow more interesting.

Let 1899 see a work done which shall make the close of this century memorable for lasting results.

LYNDS JONES, *Chairman of Work.*

EDITORIAL.

We welcome to the field of ornithological literature the *Bulletin of the Cooper Ornithological Club*, of California. This new sixteen page publication is under the editorial management of Mr. Chester Barlow, assisted by Messrs. Henry Reed Taylor and Howard Robertson, and is published at Santa Clara, Calif. It is published bi-monthly in the interests of the Cooper Ornithological Club, and is a step in the right direction in bringing together the results for which this active organization has always been noted.

It is a pleasure to herald the reappearance of the *Osprey* after an absence of a few months. Its reappearance under the editorial management of Dr. Elliott Coues and Theodore Gill, with Mr. Walter Adams Johnson as associate and Louis Agassiz Fuertes as art editor, is a guaranty of success.

Our fellow member, Mr. John W. Daniel, Jr., intends entering the field of bird literature with a magazine, the *Egg and Bird Field*. On the editorial staff we notice the well known names: Mearns, Barlow, Ridgway, Richmond, Oberholser, Taylor, Norris, et al. A magazine with such a staff of editors will be certain of a cordial reception.

Bird Lore, a new bi-monthly magazine of Ornithology, edited by Mr. Frank M. Chapman, and published by the Macmillan Company, will at once take its place among the foremost of bird publications. It is to be accurate, well illustrated, popular, and will champion the work of the Audubon Societies for the protection of our birds. May its success be complete.

PUBLICATIONS RECEIVED.

American Monthly Microscopical Journal. Vol. XIX. No. 12, Vol. XX, No. 1.

Birds and all Nature. Vol. IV, No. 6, Vol. V, No. 1.

Book Reviews. Vol. VI, No. 6, Vol. VII, No. 1.

Bulletin of the Cooper Ornithological Club. Vol. I, No. 1.

Bulletin 95. Ohio Agricultural Experiment Station.

Bulletin of the Scientific Laboratories of Dennison University. Vol. X, Vol. XI, Articles 1, 2 and 3.

Colorado College Studies. Vol. VIII.

Educational Forum. Vol. II, No. 7.

Fern Bulletin. Vol. VII, No. 1.

Journal of Applied Microscopy. Vol. I, Nos. 10, 11, 12.

Mineral Collector. Vol. V, No. 10.

Museum. Vol. V, Nos. 2 and 3.

Osprey. Vol. III, No. 4.

Proceedings of the U. S. National Museum. Vol. XXI.

The Birds of the Kuril Islands. By Leonard Stejneger. No. 1144

A Revision of the Wrens of the Genus Thryomanes Schlater. By Harry C. Oberholser. No. 1153.

The Feather-tracts of North American Grouse and Quail. By Hubert Lyman Clark, Ph. D. No. 1166.

Sportsman's Magazine. Vol. II, No. 12, Vol. III, No. 1.

Teacher and Student. Vol. VI, No. 6.

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The *Nesting* of the *Warblers*—H. C. Higgins.....Cincinnatus, N. Y.
The *Food* and *Song* of the *Warblers*—Lynds Jones.....Oberlin, Ohio.
The *Flicker*—Frank L. Burns.....Berwyn, Pa.
Geographical Distribution—W. L. Dawson.....Oberlin, Ohio.
Variation—R. M. Strong.....11 Mellen St., Cambridge, Mass.

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Daniel, John W., Jr.....Lynchburg, Va.
Dawson, William L.....Oberlin, Ohio.
Dickinson, J. E.....1122 S. Winnebago St., Rockford, Ill.
Gault, Benj. T.....Glen Ellyn, Ill.
Gray, Russell.....63rd and Lansdowne Ave., Philadelphia, Pa.
Higgins, Henry C.....Cincinnatus, N. Y.
Hollister, N.....Delavan, Wis.
Howell, Arthur H.....Biol. Surv., Dep't of Agri., Washington, D. C.
Jocobs, J. Warren.....Waynesburg, Pa.
Jones, Lynds.....Museum, Oberlin, Ohio.

Knight, Ora W.....584 Hammond St., Bangor, Me.
Law, J. Eugene.....Palto Atlo, Calif.
McLouth, C. D.....Muskegon, Mich.
Menke, H. W.....Aurora, Wyo.
Mitchell, Walton I.....1953 Stout St., Denver, Col.
Norton, A. H. W.....Waring, Kendall Co., Texas.
Oberholser, H. C.....Department of Agriculture, Washington, D. C.
Only, Frank.....Gay's Mills, Wis.
Oldfield, W. A.....Port Sanilac, Wis.
Parker, A. C.....Pleasantville Station, N. Y.
Pennock, C. J.....The Pines, Kennett Square, Pa.
Sage, John H.....Portland, Conn.
Savage, David L.....Salem, Iowa.
Savage, James.....134 Abbott St., Buffalo, N. Y.
Schrage, E. B.....Pontiac, Mich.
Shearer, A. R., M. D.....Mont Belvieu, Texas.
Strong, R. M.....11 Mellen St., Cambridge, Mass.
Treat, Willard E.....East Hartford, Conn.
VanWinkle, Ed.....Warsaw, Ind.
Wayne, Arthur T.....Mt Pleasant, S. C.
Wilson, Sidney S.....420 South 10th St., St. Joseph, Mo.

HONORARY MEMBERS.

Ballard, Prof. H. H.....Pittsfield, Mass.
Langille, Rev. J. H.....Kensington, Md.
Nehrling, Prof. H.....Milwaukee, Wis.
Widmann, Otto.....Old Orchard, Mo.

ASSOCIATE MEMBERS.

Baskett, James Newton.....Mexico, Mo.
Carriger, Henry W.....Sonoma, Calif.
Clark, J. N.....Meridian, Wis.
Dershimer, Mrs. T. D.....Square Top, Wyoming Co., Pa.
Dean, Mrs Nettie S.....510 Spruce St., Scranton, Pa.
Harrison, Whit.....LaCrescent, Minn.
Knox, Miss Edna.....Sheffield, Ill.
Mathews, Miss Caroline.....90 Main St., Waterville, Me.
Silloway, P. M.....Roodhouse, Ill.
Upham, Geo N.....Coffeyville, Kans.
VanWagner, Millard.....47 Leonard St., New York, N. Y.
Walker, Geo. H.....533 East Madison St., Belvidere, Ill.
Watkins, L. Whitney.....Manchester, Mich.

DECEASED MEMBER.

Bendire, Maj. Chas. E.....Honorary. 1897.

BIRD'S NESTS. NO. 2.

GREEN HERON.

July 26, 1896, 2:15 P. M.—It was a sultry day, and after tramping a mile, I had scarcely heard the note of a single bird. I forced my way, as quietly as I could, among the tall weeds and plum brush into a slight opening where the plum thicket of the hill-side and the crab-apple thicket of the bottom-land join. Just as I did so an old Green Heron, with a great "*quawk*," flew from a limb above her nest, where she had been feeding one of her three young ones They had clambered about four feet above the nest and stood with outstretched necks panting for breath in the hot sun, motionless, except for the quick pulsations of their little throats. The old one made such a noise at my approach that one of the the young became frightened and let fall a four-inch sun-fish which it had just swallowed. As long as I watched, the old one kept up a continuous harsh cry of "*kuck*"—"*kuck*"—sometimes almost as loud as its call of "*quawk*," and sometimes, when I remained motionless, letting its voice fall till it sounded like the steady tap-tap of a hammer in the distance, though the bird was only three or four feet away. The young were almost covered with feathers above, while below there was nothing but white down. They had more or less down all over. Their breasts were streaked with brown and white. On the throat the streaks were finer. The feathers on the back appeared to be black, tinged with greenish and edged with rufous brown. There was a white stripe at the bend of the shoulder. Their eyes were very bright and their feet were large, of a dull yellow, tinged with green. Their bills were flesh-colored, with black tips, and in the sun appeared translucent. After leaving this nest, twenty-six feet further on I found another Green Heron's nest, thirteen feet from the ground in a crab-apple tree. It contained four young, entirely covered with whitish down. They became alarmed at my coming up the tree, and each little fellow opened wide his bill and dropped a sun-fish about two and one-half inches long at me. Though they were so young, they began to scramble up the thorny branches a full foot above the nest. At this time I had never heard of this habit, but since, I see Mr. Harry C. Oberholser has recorded it.* One was in

*Page 264. Bulletin of the Ohio Agricultural Experiment Station. Technical Series, Vol. 1, No. 4. Article XXIV: A Preliminary List of the Birds of Wayne Co., Ohio, by Harry C. Oberholser.

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such a hurry he lost his balance and hung by his strong feet, holding his "chin" above the limb, but still unable to pull up his fat little body. I put him, struggling, back into the nest where he with apparent astonishment stared at me as I descended. This is the first time I have ever found these birds nesting close together, but according to the books they do occasionally nest in small colonies. It was several days before I had an opportunity to visit them again, but when I did so, I found them still mostly covered with down but already several feet away from the nest, hiding in the grape vines which covered the tops of the trees. After I was sure they had no further use for the nests I took both home for examination. The dimensions in inches are as follows: (Where two dimensions are given under a single heading the maximum and minimum are meant.)

NEST NO.	HEIGHT.	DEPTH.	INSIDE TOP DIAMETER.	OUTSIDE TOP DIAMETER.	OUTSIDE BOTTOM DIAMETER.	WIDTH OF RIM.	WEIGHT IN OUNCES.
1	5	2	7x5	12x9	7x6	3x1	5
2	5	3	8x6	17x13	8x7	5x3	10

The first nest, which was in a plum tree, eight feet from the ground on a horizontal limb at the base of two nearly opposite branches, contained the following:—199 pieces of Plum (*Prunus americana*) sticks measuring 108 feet; 43 of Willow (*Salix sp.?*) 24 feet. 23 of Box Elder (*Acer negundo*) 12 feet; 1 of cherry (*Prunus serotina*) 7 inches; and 1 of Great Ragweed (*Ambrosia trifida*) 5 inches. The largest piece in the nest was of Willow, 21 inches. The total number of pieces was 267 and the total length 145 feet. The second nest, which was in a crab-apple tree thirteen feet from the ground, was built on a similar branch and contained:—206 pieces of Crab (*Pyrus ioensis*) sticks measuring 108 feet; 16 of Willow, 11½ feet; 3 of Haw (*Crataegus punctata*) 2 feet; 10 of Box Elder, 8½ feet; 6 of Plum, 4 feet; 2 of Osage Orange (*Toxylon pomiferum*) 2 feet; 14 of Grape (*Vitis vulpina*) 12 feet; and 8. of Waahoo (*Euonymus atropurpureus*) roots, 9 feet. The longest piece in the nest was of Waahoo root, two and one-half feet. The total number of pieces was 265 and the total length 157 feet. This gives us the rather novel result of a difference of only two in the number of pieces, and but twelve feet more material in one nest than the other; also, though the nests were but twenty-six feet apart, one was in a plum tree in a thicket of the same and contained almost three times as many plum twigs as all other material put together. The second nest, built in a crab-apple tree in a thicket of crabs mixed with some other trees, contained the same

number of feet of crab twigs as the first had of plum; also the crab twigs composed three and one half times as many pieces as all the other materials together. As to whether the birds break dead twigs from the trees or pick from the ground I cannot say; but if the former, it would have been possible for the birds to climb over the trees and without going to the ground to have obtained all the materials used in the first nest within twenty or thirty feet of the nest, and the bulk of the second nest the same. The two pieces of Osage Orange appeared to have been picked from the brushwood, and the Waahoo roots evidently came from the creek bank not more than fifty feet distant. At present I will not draw any conclusions; but the facts would indicate: That it was possible that the bulk of the material was picked from the trees and not from the ground; also the birds made use of the material which was most easily obtainable.

VIRGINIUS H. CHASE, *Wady Petra, Stark Co., Ill.*

THE LORAIN COUNTY, OHIO, WINTER BIRD FAUNA FOR 1898-9.

The work of determining with some degree of completeness what is our winter bird fauna for any given year as well as for a term of years, which was begun in December, 1897, has been continued during the season just closed. An account of that work may be of interest as a comparison with the 1897-8 results.

The severe storm of November 19-22, which swept from Montana sharply south-eastward across the central Mississippi Valley and upper lake region, thence north-eastward into Ontario, when it rapidly diminished, ushered in an early Winter, with snow as far south as Kentucky and freezing temperature nearly to the Gulf. Freezing temperatures continued in Ohio during the remainder of November and into December, with readings of 10°, 8° and 5° on the 8th, 10th and 14th of December, respectively. About the middle of December a marked warm wave overspread the country, which continued, with moderate fluctuations, until the close of the month, when another cold wave swept down from the north-west. During this warm period Bluebirds, Robins and Meadowlarks were many times reported.

The first few days of January were moderately warm, but the zero

mark was reached on the 11th. A reaction to 51° on the morning of the 14th was followed by moderate weather until the 27th, when zero temperature prevailed for a week. After a slight respite of three or four days, the severest weather of the season overspread the whole country, the temperature ranging from zero to 20° below for ten days, beginning February the 8th, at Oberlin. A marked warm wave during the third week of February was followed by moderate winter weather until the close of the month.

The snow-storm of the latter part of November was the only considerable snow until March, and that was gone by the middle of December. At no time, except early in December, was there snow enough on the ground to cause the birds any serious inconvenience.

Four excursions into the surrounding country were made in each of the three months. In December these were: on the 3d and 17th, half day walks into the woods and fields about Oberlin; and on the 22d and 27th, all day tramps across country to Lake Erie and home in the evening *via* the electric lines. These netted thirty-two species for December. An account of the work of the 22d may be found in BULLETIN No. 24, page 4, by Mr. W. L. Dawson. The other trips were made by the writer alone. In January the four trips —3d, 14th, 21st and 30th—were in company with Mr. Dawson, that of the 3d being a whole day tramp to Chance Creek and back. Only twenty-one species were recorded during this month, with but one species which was not seen in December. In February three half day and one all day tramps resulted in a record of twenty-six species. These were on the 4th, with Mr. Dawson; 11th, all day across country to Lake Erie, alone, with below zero temperature; 20th, half day, with Mr. Dawson; 25th, half day, alone. There were nine new records for the year 1899, this month, including Robin, Bluebird, Meadowlark and Broad-winged Hawk, which were undoubted migrants on the 20th. It may not seem fair to reckon the February migrants in with the strictly winter birds; but it must be understood that these and others as well, would have been recorded in November after the winter actually began, if the record had begun then. It has been found that the calendar winter is a fair average both as to weather and birds.

In the following list of the birds observed during the past winter months, the letter C indicates that the species was common in some place at some time during the winter, and the letters T. C. that it was tolerably common. The others were uncommon, rare or casual.

Bob-white. T. C.
Red-tailed Hawk.
Red-shouldered Hawk.
Broad-winged Hawk.
Am. Rough-legged Hawk.
Golden Eagle.
Bald Eagle.
Pigeon Hawk.
Am. Sparrow Hawk. T. C.
Barn Owl.
Lang-eared Owl.
Short-eared Owl.
Barred Owl.
Screech Owl.
Hairy Woodpecker. C.
Downy Woodpecker. C
Red-headed Woodpecker. T. C.
Red-bellied Woodpecker. T C.
Flicker.
Horned Lark. T. C.
Prairie Horned Lark. T. C.
Blue Jay. C.
American Crow.
Meadowlark.
American Goldfinch.
Snowflake.
Lapland Longspur.
Tree Sparrow. C.
Slate-colored Junco.
Song Sparrow. T. C.
Cardinal. T. C.
Cedar Waxwing.
Northern Shrike.
Brown Creeper.
White-breasted Nuthatch. C.
Red-breasted Nuthatch.
Tufted Titmouse. C.
Chickadee. C.
Golden-crowned Kinglet.
Robin.
Bluebird.

Total number of species 41.

During the past three winters Mr. Dawson and the writer have recorded fifty species; the record of forty-one species for the past winter being the largest. Each winter adds a few to the list, no doubt largely due to increasing activity on our part. Easier access to the lake shore would undoubtedly result in greatly extending the number of winter birds.

Lynds Jones, *Oberlin, Ohio.*

A PRIMITIVE SWIFT COLONY.

While camped on the edge of beautiful Lake Drummond in the heart of the Dismal Swamp, June, 1897, we noticed a number of Chimney Swifts sailing about the lake. Looking for the chimney of our hotel, (two rough board shanties), we found it missing and the question, Where do they nest, naturally enough arose. The nearest habitation being some five miles distant and that, if our memory serves us right, possessed but a single chimney, which was in use and could not be let to the swifts for a household.

On the 17th of June we made a trip to the southeast end of the lake per boat. Here enormous Bald Cypresses, with Telansia draped arms stand as outposts in the lake, some distance from the shore. These trees are "old timers." A few stumps—tell-tales of human vandalism—measured as much as eight feet in diameter. Most of these guarding sentinels of the Sombre Lake are hollow, mere hulls, and these natural chimneys furnish a safe retreat to the bat and a nesting site to our swifts.

We examined all the trees in this end of the lake and found six nests, three of which contained eggs, two young, and one was inaccessible. Two nests contained four eggs each and one five. The other two concained three and four young respectively. Three were about twelve feet from the water, one about fifteen, and one twenty-five.

One of the trees seemed to be especially favored by the swifts, as we noticed at least half a dozen entering it,—but we were unable to examine it thoroughly, as it was impossible for us to ascend it—its outside and inside diameter being too great.

Here, then, we have a small group of birds, isolated from civilization and consequently not subjected to the changed environment of their semi-domesticated brethren. Let us hope that they will flourish in this isolated spot in order that we may be able, in the years to come, to note what changes, if any, civilized man has unwittingly produced among our swifts.

PAUL BARTSCH, *Washington, D. C.*

A MARCH HORIZON.

Events repeat themseles. Little did the writer think, when he spent March 12, 1898, with the birds, that March 11, 1899, would find him him again in the field, traversing the same territory, bent upon breaking the previous year's record. An account of the 1898 trip will be found on page 21 of BULLETIN 19, to which the reader should turn for a comparison of the one about to be described.

The weather conditions in 1898 were, on the whole, rather more favorable for migratory movements than the present year. In 1899 a marked cold wave on the 8th followed the largest fall of snow of the year two days earlier, but it was followed by rapidly moderating weather which reached a temperature of 50° on the morning of the 11th, reaching during the day 63°. Clouds obscured the sun nearly all day, but no rain

fell, and a brisk south wind blew continuously. In the morning, at the six o'clock start, the ground was well covered with snow, the drifts being several feet deep in favorable places. Before the sun reached the western horizon there was no snow to be seen. Hence, the streams were rushing torrents and the fields soaking wet or covered with water. The soughing wind and rushing water made sight the only sense to be depended upon. The walking was heavy!

Before a mile of the journey was behind me the records had reached fourteen—and the indispensable lead-pencil had been forgotten! However, a farmer's wife graciously supplied the want and I went on my way rejoicing. After passing through a wood in which nearly all the woods birds were recorded, it became evident that the fields or open country would yield larger results than the woods, except the evergreen thicket in the gorge of Chance Creek. But detail is wearisome, let me turn rather to the general results.

The early morning hours witnessed large numbers of migrating Crows, Bronzed Grackles and Bluebirds. During the last three hours of the afternoon the Crows were continuously passing eastward and the Bronzed Grackles, Rusty and Redwinged Blackbirds westward. There were thousands of each species. Near Lake Erie and on its shore, *flocks* of Bluebirds were moving westward, or resting in the woods. Some attempt was made to count the Bluebirds, but the number reached five hundred before two o'clock, and after that time flocks were in sight almost continuously, so the attempt was abandoned. Restless flocks of ducks, mostly Pintails, vacillated between the icy lake and the shallow field ponds.

During the day forty-one species were recorded, thus breaking the previous year's record. For the sake of comparison the list of species is here given. C indicates that the species was common, A that it was abundant.

American Herring Gull. 1.
Mallard. 6.
Pintail. C.
American Golden-eye. 1.
Killdeer. C.
Bob-white. 1.
Ruffed Grouse. 1.
Mourning Dove. 2.
Marsh Hawk. 1.
Sharp-shinned Hawk. 1.
Red-tailed Hawk. C.
Red-shouldered Hawk. C.
Broad-winged Hawk. 1.
Am. Rough-legged Hawk. 2.
Am. Sparrow Hawk. 2.
Barred Owl. 1.
Hairy Woodpecker. C.
Downy Woodpecker. C.

Red-headed Woodpecker. C.
Red-bellied Woodpecker. C.
Flicker, C.
Prairie Horned Lark. C.
Crow. A.
Blue Jay. C.
Cowbird. C.
Meadowlark. C.
Red-winged Blackbird. A.
Rusty Blackbird. C.
Bronzed Grackle. A.
Tree Sparrow. C.
Junco. C.
Song Sparrow. C.
Cardinal. C.
Towhee. 3.
Northern Shrike, 2.
Brown Creeper. 1.
White-breasted Nuthatch. C.
Tufted Titmouse. C.
Chickadee. C.
Robin. C.
Bluebird. C.
Total 41.

Thus it will be seen that of the forty species recorded on March 12, 1898, nine were not recorded on March 11, 1899, while ten were recorded in 1899 which were not recorded in 1898.

LYNDS JONES, *Oberlin, Ohio.*

A SUGGESTION TO OOLOGISTS.

Before we enter upon another active campaign of bird nesting, it is fitting that we should pause a moment to reflect upon the true aim of our toil, risks and trouble, as well as delight and recreation. How many of us can define the phrase "Collecting for scientific purposes," which, like liberty, is the excuse for many crimes?

If it is true, as has been asserted, that oology as a scientific study has been a disappointment, I am convinced that it is not on account of its limited possibilities, but simply because the average oologist devotes so much time to the collection and bartering of specimens that no time is left for the actual study of the accumulating shells. In other words, he frequently undertakes a journey without aim or object.

The oologist has done much toward clearing up the life history of many of our birds, but as observations of this nature can often be accomplished without the breaking up of the home of the parent bird, it alone will not suffice as an excuse for indiscriminate collecting. After preparing the specimen for the cabinet his responsibility does not end but only begins. A failure to add something to the general knowledge is robbing the public as well as the birds. He who talks fluently of the enforcement of strict laws for the preservation of our wild birds, their nests and eggs,

and fails to protect and encourage those about his premises, falls short of his duty ; and if his cabinet contains bird skins or egg shells which might just as well have remained where Nature placed them, he is inconsistent, demanding that others abstain that he may indulge.

For fear of starting an egg collecting craze, I have always been reluctant to open my egg cabinet to boys, well knowing my inability to explain to their entire satisfaction just why I should rob nests and they should not ; any more than certain well known ornithologists can clear themselves from the imputation of cruelty when destroying well-nigh exterminated species in the breeding season and leaving the young to rot in embrayo or die a slow death by starvation.

In conclusion I would say that when an oologist constantly keeps in mind and acts under the assumption that the birds are his best friends and not his deadly enemies, he cannot go far wrong, and the means he employs will be justified in the light of subsequent study and research of data and specimens. If any of us fall short in this we have only ourselves to blame. Let us then collect with moderation and fewer eggs and more notes be the order of the day.

Frank L. Burns, *Berwyn, Penna.*

GENERAL NOTES.

Notes from New Auburn, Minn.—January 15, while walking along the shore of a lake and through two patches of woods, I saw eight Chickadees, six White-breasted Nuthatches, three Downy Woodpeckers, and about twenty-two Redpolls. The thermometer registered 41° above zero. From January 29 to February 12 the mercury was not above zero, and every morning found it from 12 to 32 degrees below. There was a flock of twelve to fifteen Snowflakes that fed regularly in one of the fields during that time. February 12 a flock of about 100 or 125 Snowflakes settled for a short time in a field and then moved on towards the south-west. The thermometer stood at 10° above at the time.

G. M. Burdick, *New Auburn, Minn.*

Birds in a Snow-storm.—During and after a recent snow-storm, when the ground was covered with several inches of soft snow, Robins, Meadowlarks and the blackbirds gleaned for food in the ditches and "dead furrows" in the fields where the water had melted the snow. They seemed to be as much at home in the shallow water as the true

waders, and just as cheerful. The Crows were able to scratch the snow aside and search out the grain in the fields. An inundated field, where weeds and grasses had been allowed to grow in bewildering confusion, afforded a brimming larder for Goldfinches, Tree Sparrows and Song Sparrows. Here they, too, were soon obliged to lift the soaked grass heads from the water, before their hunger could be satisfied. The dainty dress of the Goldfinch seemed very much out of place down among the rotting vegetation.

LYNDS JONES, *Oberlin, Ohio.*

BRUNNICH'S MURRE, *URIA LOMVIA* IN LORAIN COUNTY, OHIO.

It gives me great pleasure to announce a hitherto overlooked Lorain County record for this species. Mr. A. Hengartner, of Lorain, Ohio, informs me that on December 25, 1896, while passing along the lake shore some two miles west of Lorain, he came upon a company of six of these birds. Three were shot and one, which was some distance in from the water on the beach, was captured alive. The other two escaped. Of the four specimens captured, one is in the collection of the Lorain High School, and one has been presented to the Oberlin College Museum by Mr. Hengartner. The writer believes that this company of six individuals is the largest one on record for the 1896 inland flight of this maritime species.

LYNDS JONES, *Oberlin, Ohio.*

NOTES FOR THE COMMITTEE ON VARIATION.

It would be a great favor if members who are willing to contribute to the work of the Committee on Variation would send in their names at an early date with some indication of the amount of song sparrow material at their disposal.

Measurements and examinations of even only one race are of value, for with the methods to be employed it is necessary to have a large number of specimens studied. In the co-operative method of study a member with only a few specimens can do work of value by reporting on what he does have. It is desirable to have material as widely repre-

sentative as possible. All contributions will of course receive full credit.

Study of variation need not be limited to song sparrows. Variations, including abnormalities, in other birds or their eggs should be recorded and studied. I would recommend a consideration of the material described in a recent publication by J. Warren Jacobs, entitled *Gleanings from Nature*, which is a good picec of work and offers opportunities for a good deal of study.

R. M. Strong, *11 Mellen St., Cambridge, Mass.*

ELECTION OF NEW MEMBERS.

HONORARY.

Robert Ridgway, Smithsonian Institute, Washington, D. C.

Dr. C. Hart Merriam, United States Agricultural Department, Washington, D. C.

ACTIVE.

Edward J. Court, United States Geological Survey, Washington, D. C.

Ned Dearborn, M. S., Durham, N. H.

ASSOCIATE.

Thomas D. Keim, Lock-box 84, Bristol, Pa.

Adverse votes should be sent to the secretary, Mr. W. L. Dawson, Oberlin, O., before April 15.

INFORMATION WANTED.

A year ago the editor made an attempt to collect data regarding the migrations of the Robin, Bluebird, Meadowlark and Killdeer. Too little information was received to make any sort of a report possible. The extreme cold of February of the present year no doubt considerably affected these birds, as well as others, and knowledge of their later movements over the whole country would be interesting and valuable. Will not every one who reads this notice send the editor, on a postal card, a brief notice of the arrival of each of these species at his station, at once? A statement when they became common would also be interesting.

Lynds Jones, *Oberlin, Ohio.*

EDITORIAL.

Certainly the most notable of the many good things in the February, 1899, *Osprey*, is the "Letter Box," which contains Dr. Gill's "Suggestions for a New History of North American Birds." While there may be many differences of opinion as regards the details suggested, the general plan of making it the greatest work in the world upon birds will meet the approval of every student of Ornithology. A great deal has been published about the most of our North American birds, but this matter has never been brought together in an available compilation. A great deal more is known about these birds than has ever been published, much of it, no doubt, put aside in old note-books and note-books not so old. Dr. Gill's suggestions contemplate as complete a compilation of all that is now known about all of our birds as possible, and where there is any manifest lack of completeness, to take active measures to supply that lack. Completeness, humanly speaking, is to be the watchword.

It is not proposed to prepare and issue this great work tomorrow, nor next week, nor next year, but to begin with the known, working out the unknown as rapidly as may be. It is this conception of the vastness of the enterprise, the recognition of how little we really know, and how much needs to be done to round out our knowledge, that appeals to us so strongly. The inauguration of so great a work would set in motion the forces which would begin the needed revision of our present arrangement and nomenclature, which would bring about an agreement as to the value of characters necessary to establish the groups from class to subspecies and thus effectually check the present marked tendency toward Quadrinomialism or, in other words, toward the undue and illogical elevation of minor characters.

The plan to begin the issue of this "History" as supplemental to the *Osprey*, either unpaged or else arbitrarily paged, and not in consecutive order, certainly has its advantages, as Dr. Gill has pointed out. But there seem to us grave disadvantages as well. We heartily second the nomination of Dr. Coues as the Editor-in-chief, with a corps of able helpers who could relieve him of a large share of the less important work, and a younger associate who would be fully capable of bringing it to completion in the event of a longer continuance of the enterprise than anticipated, and the failing strength of the chief editor.

We hope that the work may be begun without further delay.

Judging from the effect of the extremely cold wave of the last week of January and the first week of February, 1895, when the Bluebirds were almost exterminated, it would be fair to suppose that the even colder weather of the first and second weeks of February just past, would have finished them. As indicated elsewhere in this issue, however, it will be seen that Bluebirds were very much in evidence in Lorain County, Ohio, on March 11. They have been fairly common in many places in the county during the greater part of March. It would seem that the survivors of 1895, being the fittest to survive, produced a race of hardier birds which found the recent extreme cold scarcely an inconvenience. Let us hope that they will survive unnumbered winters.

The signs of returning prosperity are more and more manifest in our chosen field of science as well as in the industrial world. The many different organizations for the study of birds, state and otherwise, are publishing their own records Thus the Maine Ornithological Society contributes to the science thru its quarterly "Journal" of ten pages. The Cooper Ornithological Club likewise finds its sixteen-page illustrated bi-monthly "Bulletin" a far greater satisfaction than a few pages in some other publication. The publication of the Michigan and Iowa organizations continue to improve. "Bird Lore," under the editorship of Mr. Frank M. Chapman and management of the Macmillan Company, enters the field as the champion of bird protection, and has the promise of a wide circulation and a useful mission. The growing numbers of these publications exclusively devoted to Ornithology indicate a growing conception of the need of earnest, careful, discriminating study of the whole field. It is well so.

In *Forest and Stream* for February 25, 1899, we notice an article by our fellow member, Mr. Benj. T. Gault, in which the Crow figures as a nest robber of the Prairie Hen, and of many other birds. It seems hard to believe, sometimes, that the black side of the Crow character is not more prominent than the other side.

PUBLICATIONS RECEIVED.

New Mallophaga, III. Comprising Mallophaga from birds of Panama, Baja California and Alaska, by Vernon L. Kellogg.

Mallophaga from birds of California, by Vernon L. Kellogg and Bertha L. Chapman.

The Anatomy of the Mallophaga, by Robert E. Snodgrass.

This publication is one of the "Occasional Papers of the California Academy of Sciences," this one being No. VI.

In the first part Professor Kellogg has described twenty new species of Mallophaga and in the second part the two authors have jointly described twenty-eight new species. Besides these forty-eight new species, seventy-three previously known ones were found upon the specimens examined. A complete list of the hosts adds value to these admirable studies. The numerous figures of species are well executed and clear. This work, together with the Anatomy of the Mallophaga, by Robert E. Snodgrass, which forms the third part of this paper, is much needed both from an Entomological and Ornithological standpoint. We shall await further studies of the Mallophaga with interest. L, J.

A Precise Criterion of Species,* by (Dr.) C. B. Davenport and J. W. Blankinship, Harvard University.

In this carefully considered discussion of a most vexing problem, Dr. Davenport has mapped out a method of procedure in the determination of species and varieties which might be profitably adopted by our A. O. U. Committee on Classification and Nomenclature. If a precise criterion of species is among the possibilities, which Dr. Davenport clearly demonstrates to be, then it is of the first importance, in the interest of a stable nomenclature, that its adoption should not be postponed. We commend this paper to the careful consideration of those interested in classification. L. J.

Bulletins 54 and 55, New Hampshire College, Agriculture Experiment Station. *Bulletin 54*. The Winter Food of the Chickadee, by Clarence M. Weed.

This paper of sixteen pages and eleven figures in the text, is one of a series intended to determine the economic importance of our common birds, and is in line with the work carried on by our national Agricultural Department. Would that every state experiment station might realize the importance of this sort of work and make ample provision for its prosecution. The author's "Conclusion" will illustrate the standing of our Chickadee. "The investigations recorded in this *Bulletin*, show that the Chickadee is one of the best of the farmer's friends, working

*Reprint from *Science*, N. S., Vol. VIII, No. 177. Pages 685-695. May 20, 1898.

thruout the winter to subdue the insect enemies of the farm, orchard, and garden. For the efficient service thus rendered the bird asks no pay, although it may be induced to remain more of the time upon the farm premises if bones or suet are hung in trees, where the birds may get it during the winter."

Bulletin 55. The Feeding Habits of the Chipping Sparrow, by Clarence M. Weed.

In this paper of twelve pages we have the complete record of one day's allowance of three young Chipping Sparrows, "so nearly full grown that they hopped out of the nest the second day after these records were made." The observations were made upon a nest, placed conveniently near a window, by the author and Mr. W. F. Fiske, beginning at 3:40 A. M. and closing 7:30 P. M. of June 22. During this day the young were fed 189 times, and so far as it was possible to ascertain, upon injurious insects and worms. It is thus made clear that even this seed-eating bird, so familiar to the door-yard, is one of man's indispensable allies in the ceaseless war against insect pests. L. J.

A Preliminary List of the Birds of Belknap and Merrimac Counties, New Hampshire, with notes by Ned Dearborn. Presented to the Faculty of the New Hampshire College of Agriculture and the Mechanic Arts as a thesis for the degree of Master of Science, June, 1898.

It is cause for congratulation that our institutions of higher education are not only accepting but encouraging original field work as worthy of higher degrees. It evinces a wholesome reaction from a once studied neglect of this important phase of life. Both the structure and the activities of animals have their legitimate place, and neither should throw disrespect upon the other. We welcome this list of birds as another illustration of the real importance which the study of the local fauna is coming to have, as well as a contribution to the literature of a region which has been thus far little heard from.

The list comprises 191 species and sub-species, arranged in accordance with the A. O. U. list of 1895, with the changes up to 1898 incorporated. While the scientific names are in strict accord with the A. O. U. list, it is not universally true of the vernacular names. It is the writer's opinion that correctly written vernacular names are hardly less important than the scientific names.

While an index of such a list would hardly seem necessary, a brief summary would add not a little to it.

The list is the result of ten years of field study by the author, supple-

mented by other authentic records. Many of the species are liberally commented upon, matters of interest concerning all the species known to the author and the average dates of migration for the ten years are given. The extreme as well as the average dates of migration would add interest and value to the record.

The typographical appearance is unusually pleasing and adds materially to the well prepared list. L. J.

American Monthly Microscopical Journal. Vol. XX, Nos. 2 and 3.

Birds and All Nature. Vol. V, Nos. 2 and 3.

Bird Lore. Vol. I, No. 1.

Book Reviews. Vol. VII, Nos. 2 and 3.

Bulletin of the Cooper Ornithological Club. Vol. I, No. 2.

Bulletins 159 and 160, Cornell University Agricultural Experiment Station.

Bulletin of the Michigan Ornithological Club. Vol. II, Nos. 3 and 4.

Bulletins 96, 97, 98, Ohio Agricultural Experiment Station.

Bulletins 44 and 45, Pennsylvania State College Agricultural Experiment Station.

Journal of Applied Microscopy. Vol. II, No. 1.

Journal of Elisha Mitchell Scientific Society. Vol. I, No. 1.

Journal of the Maine Ornithological Society. Vol. I, Nos. 1 and 2.

Museum. Vol. V, Nos. 4 and 5.

Osprey. Vol. III, Nos. 5, 6, 7.

Report of the State Botanist. 1897. With plates. New York State Museum.

Sportman's Magazine. Vol. III, No. 2.

Teacher's Leaflets. Nos. 1 to 13 inclusive. The College of Agriculture, Cornell University.

Transactions of The Academy of Science of St. Louis. Vol. VIII.

THE MIGRATION OF KILLDEER, MEADOWLARK, ROBIN AND BLUEBIRD.

The information received in response to the call in the last BULLETIN is not sufficient to determine the northward movement of any of the species named, nor even to determine the northward winter limit. But the data received indicates that in the middle regions the migrations were nearly a week later than usual. But strangely enough, they clearly indicate that as far east as Ohio at least, Meadowlark, Robin and Bluebird wintered in small numbers further north than usual. A considerable activity in the field is necessary to distinguish between the winter resident individuals of a species and the first migrants. There is nothing to indicate how far north Killdeer passed the winter except that it is reported as wintering at Stillwater, Oklahoma, and absent from Lincoln, Nebraska.

In this connection it may be of some interest to compare the average and actual dates of arrival for these four species for a series of years in four different localities representing the upper middle Mississippi Valley, the lower lake region, and Maine. The contributors of these notes are: Mr. N. Hollister, Delavan, Wis.; Mr. C. H. Morrell, Pittsfield, Me.; and the writer for Grinnell, Iowa, from 1885 to 1890 inclusive, and from Oberlin, Ohio, from 1894 to 1899 inclusive.

KILLDEER.

	1894	1865	1896	1897	1898
Delavan, Wis.	March 10.	March 23.	March 9.	March 22.	March 7.
Oberlin, Ohio.	March 5.	March 23.	Feb. 27.	March 6.	March 6.

MEADOWLARK.

	1894	1895	1896	1897	1898	1899
Delavan, Wis.	March 5.	March 24.	March 17.	Jan. 15.	March 5.	March 6.
Oberlin, Ohio	March 10.	March 23.	March 17.	March 15.	March 11.	March 8.
Pittsfield, Me.	April 18.		April 18.	April 24.	Uncommon.	

ROBIN.

	1894	1895	1896	1897	1898	1899
Delavan, Wis.	March 6.	March 18.	March 8.	March 11.	March 8.	
Oberlin, Ohio	Feb. 28.	Jan. 7.	Feb. 26,	Feb. 13.	March 7.	March 20.
Pittsfield, Me.	March 31.	April 7.	March 28.	March 30.		April 8.

BLUEBIRD.

	1894	1895	1896	1897	1898	1899
Delavan, Wis.	March 4.	March 25.	March 10.	March 11.	March 7.	
Oberlin, Ohio	Feb. 28.	March 23.	Feb. 29.	Feb. 17.	March 7.	Feb. 20.
Pittsfield, Me.	March 13.		April 18.	April 7.		April 7.

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Comparing Delavan, Wis., with Oberlin, Ohio, as to the time of arrival, since they are more nearly alike in physical features and latitude, we find that while Killdeer, Robin and Bluebird arrive somewhat earlier at Oberlin than at Delavan, on the average, the opposite is true of Meadowlark. It is difficult to assign a reason for this difference unless it be due to the fact that the species regularly winters at Oberlin while it apparently does not winter at Delavan, Wis. The wintering individuals are disregarded in determining the migratory movements of the species, of course, and some confusion may result in exactly determining just when the first migrants appear, while at Delavan, Wis., the first ones seen will be migrants. But that part of the Mississippi Valley may present conditions peculiarly favorable for early movements of this species. The lower latitude and warmer winters of northern Ohio would make earlier movements of most species of birds reasonable and expected, other conditions being equally favorable. The much higher latitude of Pittsfield, Me., is the cause of the later appearance of all the species there.

So good an opportunity to determine which of these four hardy species reaches the north first should not be missed. Consequently the following table for each of the places mentioned has been prepared.

Grinnell, Iowa.	1885	1886	1887	1888	1889	1890
Killdeer	March 21.	March 16.	March 8.	March 17.	March 11.	March 18.
Meadowlark	March 5.	March 24.	March 8.	March 15.	Feb. 26.	March 17.
Robin	Wintered.	March 14.	March 8.	Feb. 23.	Feb. 27.	Feb. 12.
Bluebird	March 1.	Feb. 23.	Feb. 28.	Feb. 21.	March 1.	Feb. 12.

Delavan, Wis.	1892	1894	1895	1896	1897	1898
Killdeer		March 10.	March 23.	March 9.	March 22.	March 7.
Meadowlark	April 30.	March 5.	March 24.	March 17.	Jan. 15.	March 5.
Robin	March 7.	March 6.	March 18.	March 8.	March 11.	March 8.
Bluebird	March 26.	March 4.	March 25.	March 10.	March 11.	March 7.

Oberlin, Ohio.	1894	1895	1896	1897	1898	1899
Killdeer	March 5.	March 23.	Feb. 27.	March 6.	March 6.	March 3.
Meadowlaak	March 10.	March 23.	March 17.	March 15.	March 11.	March 8.
Robin	Feb. 28.	Jan. 7.	Feb. 26.	Feb. 13.	March 7.	Feb. 20.
Bluebird	Feb. 28.	March 23.	Feb. 29.	Feb. 17.	March 7.	Feb. 20.

Pittsfield, Me.	1890	1892	1893	1894	1895	1896	1897	1899
Meadowlark.		May 12.		Apr. 18.		Apr. 18.	Apr. 24.	
Robin	Apr. 4.	Mar. 28.	Mar. 31.	Mar. 31.	Apr. 7.	Mar. 28.	Mar. 30.	Apr. 8.
Bluebird	Apr. 3.	Mar. 30.	Mar. 29.	Mar. 13.	None.	Apr. 18.	Apr. 7.	Apr. 7.

In studying these tables one must remember that the Bluebirds were nearly exterminated during the winter of 1894–5, a fact which is clearly bro't out by the records of arrival for 1895 and 1896. These two years

are therefore not representative for the Bluebird. It seems pretty evident that the Bluebird averages a little earlier than any of the others, closely followed by the Robin, a little later by the Meadowlark, and often two weeks later by the Killdeer. But the Killdeer averages not a little later in Iowa and Wisconsin than in Ohio, while the Meadowlark averages a little earlier. In practice the student of migration not seldom finds all four species on the same day. Here in northern Ohio we rather count on seeing the Robin and Bluebird on the same day. The Meadowlark as a migrant usually comes later.

Of course these records cover a very small part of the field of the migration of these species, but being more or less representative stations in widely different regions, they may fairly be regarded as an index to the more northern parts of the eastern and middle states. While more numerous records from many other localities would furnish more reliable data upon which to base statements, it is doubtful if the relative times of migration of the four species would be materially changed. The only fair comparison is between places in which the species being studied is equally numerous in individuals. Thus, Pittsfield, Me., where Meadowlark is not common, if it is not actually rare, should not be compared with a region where the species is common, because it is very likely that the first arrivals would not be seen, and so the record would be too late. Such a condition would show fluctuations impossible to account for.

There are a number of such groups of well known birds whose movements in the spring would well repay extended study in relation to each other—a course of study in which the old note-book would take an active part. One of these groups is: Cowbird, Red-winged Blackbird and Bronzed Grackle. If members are interested enough in this group to send me their notes for a series of years (as many as you have), simply the dates of first appearance, or the statement that it winters if that be the case, I shall be glad to report on it in the next issue. The notes should be sent to me as soon as possible so that they can be carefully studied.

The southward movement of these species would be interesting, but I have at hand only notes from Mr. Benj. T. Gault, from Glen Ellyn, Illinois, and my own. These are too few to make a profitable comparison.

Lynds Jones, *Oberlin, Ohio.*

BIRD NOTES—SOUTH.

To a man reared in the north, the behavior of the familiar birds, while they are spending their winters south, must be a matter of interest. Of course, with many, such as Blue-jays, Cardinals, etc., this is not different from the behavior of such of these as remain with us; but that of Robins and others is noticeably different. It is well known, of course, that the Robins go about in large flocks, simply screaming in apparent fright, and gorging themselves upon the persisting berries which are so abundant. This winter these birds were unusually abundant on the edges of the Gulf, and were shot for market by the thousands.

I had often wondered if on the pretty, sunny, spring-like days in the south, the northern birds broke into song, but I could not get any information about it. My slight study, while very busy at other work, was along this line. There was no unanimity of habit in these matters. I found the Bluebird, on the Bay of Mobile, with his autumn call only; but at the same place I found the Chewink singing in January, not only a snatch of his old song up north, but one that was entirely new to me and quite charming. I did not shoot any, but I do not think that at this point the species could have been the White-eyed.

But one bird at least, which certainly does not remain south or have any representative here, I found occasionally singing his northern summer song. That was the Peabody bird. These were very abundant about Mobile, and sang occasionally. Brown Thrashers sang all winter on pretty days, and Mockers broke out at intervals; but the unusually severe weather there this winter shut much of this out. I saw the Catbird frequently, but he had little to say and no music.

I found some uninformed persons asking me doubtfully if the Robin actually sang in the north; and they seemed surprised at my affirmative answer.

I found Blue Jays, Cardinals, Chickadees, etc. singing as usual, but Woodpeckers were noisy only after the vernal turn had evidently set in. A beautiful and persistent singer every sunny morning was the Carolina Wren.

This winter, perhaps, gave an unusual aspect to the habits of many birds while south. I saw the Myrtle Warbler much about houses, which people assured me was unusual. Once I saw one try to fly in at a window—fluttering against the glass; and I observed them feeding upon the snow, while it lasted, much as a Snowbird or Tree Sparrow.

This reminds me that I saw our Junco—two specimens—while walking

in the woods one very warm day. These two were flitting their white tail feathers, and chatting much as they do up north here before a snow-storm. I laughed to my wife about the persistency of habit in an environment where such prophecy could be failure only, and we were sorry for the birds. *The next day after the morrow it snowed.*

I was impressed (in many strolls in the woods and swampy tangles, along with some extensive buggy rides) with the scarcety of old bird-nests. Northern people residing there tell me that in the breeding season, bird life is not nearly so evident as it is further north.

I did not hear of or observe any loss of birds by freezing. I see accounts of great destruction on the south Atlantic coast. Neither can I note any diminution of the birds here in Missouri this spring. On the contrary they seem to be unusually abundant and active—a fact noted by the ordinary observer.

I have not seen any Bluebirds, but am able to hear of them in various directions.

JAMES NEWTON BASKETT.

SOME WESTERN HORIZONS.

It has long been the fond dream of the writer to take a *leisurely* trip to the Pacific coast, stopping by the way from time to time to take sample horizons. The dream is in a fair way or realization as I pen these lines from Green River, Wyoming, on the Union Pacific railroad.

Birding from a car window is not very satisfactory, never-the-less it is inevitable for one who has birds on the brain. Hence it is that I have lists of "Birds seen between South Bend, Indiana, and Chicago," and "Birds seen between Glidden, Iowa, and Omaha, Neb.," but they are scarcely worth reproducing in print.

Waterloo, Nebraska, was chosen as a fair representative of the eastern portion of the state. This little town is situated in the fertile and well wooded valley of the Elkhorn River, near where this stream unites with the Platte. The woods on the river banks and adjoining lagoons were swarming with birds. The prairie proper and the upland are mostly given over to Dickcissel and he occupies himself here with his endless task of "sheep shearing."

A day was spent at Waterloo, that is from 9 A. M. of one day to the same hour of the next. Owing to a thunderstorm during the night and

a following cold wave, the second morning was very unpropitious and it did not swell the total horizon as much as we had reason to expect.

Sixty-two species were found and they are enumerated below simply in the order of their appearance, with letters "C" for common and "A" for abundant to indicate the more pronounced birds.

THE WATERLOO HORIZON.

Robin (rare).
Baltimore Oriole. C.
Catbird. C.
Red-headed Woodpecker.
House Wren. A.
Rose-breasted Grosbeak. A.
Blue Jay. A.
Brown Thrasher. C.
Mourning Dove. A.
Bronzed Grackle.
Red-eyed Vireo.
Warbling Vireo.
Redstart.
American Goldfinch.
Kingbird. A.
Wood Thrush.
Western Meadowlark.
Ruby-crowned Kinglet.
Western Yellow-throat.
Dickcissel. A.
Grasshopper Sparrow.
Cowbird.
Indigo Bunting.
Oven-bird.
Yellow Warbler.
Bluebird.
Phoebe.
Orchard Oriole. C.
American Crow.
Bank Swallow.
Clay-colored Sparrow. A.
Cliff Swallow.
Desert (?) Horned Lark. C.
Killdeer.
Solitary Sandpiper.
Black Tren.
Swainson's Hawk.
Cooper's (?) Hawk.
LeConte's Sparrow.
Bobolink.
Yellow-shafted Flicker.
Barn Swallow.
Sanderling (?).
Nighthawk.
Lark Sparrow.
Red-winged Blackbird.
Least Flycatcher.
Olive-backed Thrush.
Black-capped Chickadee.
Spotted Sandpiper.
Purple Martin.
Tennessee Warbler,
Black-and-white Warbler.
Bob-white.
White-throated Sparrow.
Hairy Woodpecker.
Lincoln's Sparrow.
Song Sparrow.
Pine Siskin.
White-breasted Nuthatch.
Towhee.
Downy Woodpecker.

W. L. Dawson.

THE FIRST DAY OF MAY WITH THE BIRDS.

The day was spent in my fruit-garden of some eighteen acres about ten miles from Washington, in Montgomery county, Maryland, and about three miles from the north-east corner of the District of Columbia. The locality is about 500 feet above the city, and though I am only a half-mile from the Baltimore and Ohio R. R. and from two electric roads into Washington, I am surrounded on three sides by extensive primitive forests of oak, hickory, chestnut, tulip and peperage, with dog-wood as an underbrush. It is an admirable place for the native forest birds, and fortunately the English Sparrow, though all around me, has never put in his appearance on my premises.

When I awoke at the dawn of the first day of May I did not hear the Robin, as we do so commonly in the north, for while a few spend the summer here we seldom hear them sing. The most noticable song was that of the Scarlet Tanager, several pairs of which spend the summer in the grove of forest trees around my house. There was also the cheerful whistle of the Cardinal, the tender and suggestive melody of the Wood Thrush, the chant of the Accentor, which also favored me a little after sunset with his spirited song in flight By the way, that sky-lark performance of song in flight far above the tree-tops, is very common here in the evening twilight, also occasionally during cloudy days, and I have heard it nearly every hour of the night. The monotonous song of the Chewink, the half-talking half-singing performance of the Brown Thrasher, the twitter of the Chipping Sparrow, the plaintive melody of the Field Sparrow—one of the most common bird melodies here—the strongly differentiated songs of the Prairie Warbler, the Maryland Yellow-throat and the Black-and-white Creeper, the spirited call of the Great Crested Flycatcher and the pretty syllables of the Red-eyed and Yellow-throated Vireos were among the bird melodies of the day. To-day, May 3rd, we have the Yellow-breasted Chat, which may be regarded among the latest arrivals of the season. I must not omit the Tufted Titmouse, the White-breasted Nuthatch and the Carolina Chickadee, which are among the common birds here. Of course the ever-present Crow was heard, and at night we could hear the ditty of the Whippoorwill. All the above species spend the summer here These are the birds which made the greatest impression on us, on the first day of May. Many others might have been present in other localities in the neighborhood, for the above is by no means a complete list of the birds in my part of Maryland. I have simply given the impressions of the day, for one busy on his prem-

ises, not that of the observer hidden away in the woods or swamps in search of queer things.

J. H. Langille.

A CHICAGO PARK HORIZON.

April 11, with field-glass and Chapman's Handbook carried in the hope of seeing a stranger, I reached Washington Park a little before 6 A. M., and took an hour for crossing it, on the lookout for birds. The morning was cloudy, cold and windy. This is my list: Before reaching the park one Red-headed Woodpecker, four Juncos and a flock of Canada Geese flying west-north-west (to go straight north would be to cross the business part of the city). In the park: Robins calling and singing, too numerous to count; three Blue Jays; three flocks of Fox Sparrows of ten, twelve and five respectively; ten Flickers; three Downy Woodpeckers; two Song Sparrows, one with a straw in his beak which he continued to hold while we surveyed each other; one Hermit Thrush. Not much of a list, but we are thankful for small favors in the bird line in a city of this size.

Three miles further on, in the stock yards district, I saw one more Downy Woodpecker being mercilessly "pegged" by half a dozen young hoodlums. I scraped a hasty acquaintance with them, telling them what the bird was, something about woodpeckers, and showing them pictures in Chapman's, meanwhile anxiously hoping the bird would have sense enough to fly, but he did not. While I was talking one little villain edged off and threw a clod into the tree. "Aw, quit yer peggin'," called the biggest boy, in virtuous indignation, unconscious of the piece of brick in his own dirty fist which he had just picked up when I made his acquaintance. Whether his change of heart was permanent or not I don't know. I had to hurry on to my work and leave the poor bird to their tender mercies. But they did not "peg 'im" until I turned the corner anyway. Has any ornithologist discovered why a bird will stay and be tormented, perhaps killed, when he could spread his wings and rise out of danger? This bird only flew from one branch to another of the same tree.

The hoped for stranger I saw this morning in the park was a Solitary Vireo. Two of them in fact. I could hardly believe my eyes and Chapman, but Ridgway gives this bird as passing thru Illinois, so I am happy to add this little beauty to my list of acquaintances.

Mrs. Agnes Chase, *Chicago, Ill.*

ALL DAY WITH THE BIRDS.

Ever since the writer and Mr. W. L. Dawson secured the horizon of 102 species of birds for Lorain County, on May 17, 1898, the ornithological possibilities of a day during the height of the spring migration have been constantly kept in view. Accordingly, the migrations of the present spring were carefully watched for the desired day. May 8 was finally decided upon not because it promised the largest horizon, for we could not foresee the weather and other conditions a week in advance, but because that was the day on which our work could be best arranged for the necessary absence from town, and because the migrations were manifestly a week in advance of last year.

The day dawned wet and lowering after a night of showers which again made the use of wheels impossible. In defiance of the dismal prospect we were in the field at 3:30 A. M., just as the earliest birds awakened, and had recorded forty-five species before the rain again began—about 4:15. During the hour and a half shower nothing new was seen, so we came home, recording fourteen more species on the way. Mr. Dawson's other duties made it impossible for him to continue the day's work further, so the writer was forced to brave the elements alone, with many a word of encouragement for the day's work, "Because a rainy day record can never equal that which still stands." The prospect was certainly dismal.

A half hour at breakfast—my good wife had the luncheon ready—gave a good preparation for the tramp across fields and thru woods before finally taking to the "electrics." This short tramp of three miles all still within the distinctively Oberlin region, swelled the list to eighty-one in spite of another shower of *wet* rain, which added to the discomfort of wet garments, a dripping cap and wet field glasses. But the work had to be pushed into other fields furnishing another fauna.

The hour spent on the cars in getting to Lorain and the lake shore resulted in nothing in the way of further records, but was practically that time lost—cut out of the best part of the day. Wheeling weather would have made this loss of time unnecessary.

Arriving at the lake shore at 11 o'clock, under a threatening sky, the prohecy of my busy companion seemed certain to be fulfilled. But there was no turning back now. There were no shore birds on the beach, nor any birds but swallows skimming the lake's smooth surface. A few swallows were eagerly feeding in a small swamp at Lorain, which proved to be the only Tree and Rough-winged Swallows of the day's record.

So much was encouraging. A walk of three miles along the beach resulted in four records—American Herring and Bonaparte's Gulls, Common Tern and Sharp-shinned Hawk. The hawk was wiping himself after a bath, preparatory to a trip across the lake, and did not notice that I was within a hundred feet of him. When I made a sudden movement to attract his attention he began his journey without waiting for breakfast.

The half hour spent at a 12:30 luncheon was the first half hour of sunshine of the day, and called forth a burst of song from several species until then unrecorded, causing several others to feed in the tree-tops just over the brow of the bluff on which I sat. The list had now passed the ninety mark, and I confess to a feeling of considerable nervousness when the possibilities of not recording the remaining few necessary to break the last year's record presented themselves. But the walk of two miles to Oak Point, the place of swamps with their fringe of bushes, the place of great expectations which had never before been disappointed, swelled the list to ninety-seven with only six more to break the record, and the swamp not touched yet. But "there 's mony a slip 'twixt the cup and the lip!"

The tedious swamp beating began at once but apparently with poor success. The mud was almost ooze and the vegetation so rank that it seemed an almost hopeless task for one person to do any successful work. But it had to be done. After an hour of this wading and floundering a short period of rest followed by another hour of the same sort of work, then a half hour of tree-top gazing in one of the coziest little nooks that ever delighted an ornithologist's heart, where the warblers were swarming among the topmost branches. What a boon the eight power Bausch & Lomb Zeiss proved among these tall, slender trees! I lay at full length upon the wet ground while the glasses bro't the tree-tops almost within reach of my hand. There was no need of moving, for the birds trooped by just fast enough for a careful survey of each one. The half hour of this restful work was a good preparation for a little final wading in the marshes, then two old orchards were ransacked for any overlooked warblers, and the day's work was done. The five mile walk back to the electric lines in the gloaming added nothing to the day's record. Before starting homeward stock was taken of the species recorded, for before entering the marshes I had exacted from myself a solemn promise that I would not count the species recorded nor keep the number in mind lest the real purpose of the work should be lost in the desire simply to make the list larger than last year. The note book showed 112 species

to the day's credit, eleven of them being new for the year. Of this 112, twenty-one were warblers and fifteen of them were singing—the songs of four of them being heard for the first time in the writer's experience.

Comparing the list of species with that of last year it is found that eight species on last year's list were not seen, while eighteen not seen last year are on this year's list. Of the eight not seen five were certainly in the county and probably all were. There can be little doubt that these eight, with several others as well, would have been found had it not been necessary to cut the day short on account of the heavy roads. The return home across country instead of the return to the electric lines must certainly have resulted in more records. But there are other years coming!

That the list of species recorded this year is so much larger than last while the weather was so unfavorable and but one person was at work the larger part of the time, is probably due to three causes: First, the migrations were far more crowded than last year, due to the late continuation of wintry weather and the three weeks of summer temperature which followed; Second, to greater activity in the field for weeks previous to the day appointed, during which the localities where the more uncommon breeding species might be surely found were carefully noted; and Third, to the eight power Bausch & Lomb Zeiss field glasses. Their contribution to the day's record could not be easily over estimated. They are invaluable where quick, precise, all-distance work must be done. They save many steps and no end of exasperation.

This list illustrates what may be in store for him who may be so fortunately situated that not one but every spring day may be wholly given to study of the birds. He might then hope to compare one day with another, determining the fluctuations which undoubtedly occur in the whole bird movement as well as the fluctuations of the individual species. Such work is greatly needed today. In the list which follows C following the name of a species indicates that it was common on that day.

1. American Herring Gull.
2. Bonaparte's Gull.
3. Common Tern. C.
4. Greater Scaup Duck.
5. Great Blue Heron.
6. Green Heron.
7. Virginia Rail.
8. Sora.
9. American Coot.
10. Greater Yellow-legs.
11. Solitary Sandpiper.
12. Bartramian Sandpiper.
13. Spotted Sandpiper. C.
14. Killdeer. C.
15. Bob-white.
16. Mourning Dove. C.
17. Sharp-shinned Hawk.
18. Cooper's Hawk.

19. Red-shouldered Hawk.
20. Pigeon Hawk.
21. Sparrow Hawk. C.
22. Black-billed Cuckoo. C.
23. Yellow-billed Cuckoo. C.
24. Belted Kingfisher.
25. Hairy Woodpecker.
26. Downy Woodpecker.
27. Red-headed Woodpecker. C.
28. Red-bellied Woodpecker.
29. Flicker. C.
30. Whippoorwill.
31. Chimney Swift. C.
32. Ruby-throated Hummingbird.
33. Kingbird. C.
34. Crested Flycatcher. C.
35. Phoebe.
36. Green-crested Flycatcher. C.
37. Alder Flycatcher.
38. Least Flycatcher. C.
39. Prairie Horned Lark.
40. Blue Jay. C.
41. American Crow. C.
42. Bobolink. C.
43. Cowbird. C.
44. Red-winged Blackbird. C.
45. Meadowlark. C.
46. Orchard Oriole. C.
47. Baltimore Oriole. C.
48. Bronzed Grackle. C.
49. American Goldfinch C.
50. Vesper Sparrow. C.
51. Grasshopper Sparrow,
52. White-crowned Sparrow. C.
53. White-throated Sparrow. C.
54. Chipping Sparrow. C.
55. Field Sparrow. C.
56. Song Sparrow. C.
57. Lincoln's Sparrow.
58. Swamp Sparrow.
59. Towhee. C.
60. Cardinal.
61. Rose-breasted Grosbeak.
62. Indigo Bunting. C.
63. Scarlet Tanager. C.
64. Purple Martin.
65. Barn Swallow. C.
66. Cliff Swallow.
67. Tree Swallow.
68. Bank Swallow. C.
69. Rough-winged Swallow.
70. Loggerhead Shrike.
71. Red-eyed Vireo. C.
72. Warbling Vireo. C.
73. Blue-headed Vireo.
74. Yellow-throated Vireo.
75. Black-and-white Warbler.
76. Blue-winged Warbler. C.
77. Nashville Warbler, C.
78. Orange-crowned Warbler.
79. Tennessee Warbler. C.
80. Yellow Warbler. C.
81. Black-throated Blue Warbler.
82. Myrtle Warbler.
83. Magnolia Warbler. C.
84. Cerulean Warbler. C.
85. Chestnut-sided Warbler. C.
86. Bay-breasted Warbler.
87. Blackburnian Warbler.
88. Black-throatedGreenWarbler.
89. Ovenbird. C.
90. Water Thrush.
91. Louisiana Water Thrush.
92. Maryland Yellow-throat. C.
93. Yellow-breasted Chat.
94. Canadian Warbler.
95. American Redstart. C.
96. American Pipit.
97. Catbird. C.
98. Brown Thrasher.

99. House Wren. C
100. Winter Wren.
101. Long-billed Marsh Wren.
102. White-breasted Nuthatch. C.
103 Tufted Titmouse. C.
104. Black-capped Chickadee.
105. Ruby-crowned Kinglet.
106. Blue-gray Gnatcatcher.
107. Wood Thrush. C.
108. Wilson's Thrush. C.
109. Gray-cheeked Thrush.
110. Olive-backed Thrush. C.
111. American Robin. C.
112. Bluebird.

LYNDS JONES, *Oberlin, Ohio.*

GENERAL NOTES.

On March 17, I saw, much to my surprise, three White-throated Sparrows scratching in the leaves near a clump of barberry bushes under my window. I have heard them nearly every day since, today (April 1st) included. Is this not an unusually early date, especially in so backward a season? Mr. H. C. Oberholser's "Birds of Wayne County" gives the date of their spring appearance from April 10 to May 17. I have never before observed them earlier than the middle of April.

ETHEL DANE ROBERTS, *Wooster, Ohio.*

(The Lorain County records for the years 1896 to 1899 inclusive are: April 12, April 15, April 16, April 1, respectively. My earliest record for central Iowa, during six years' study, was March 25, 1890. Has any reader an earlier record for central or northern Ohio?—Ed.)

For two years I have been carefully watching the Chimney Swifts during their season of nest building, with special reference to the question how they snip off the twigs for the nest. My back yard contains several apple trees whose tops have ceased to be of use to anything but the birds, and in these dead tops the swifts seem to find abundant nest material. They come sweeping thru them frequently, sometimes stopping to snip off a twig, but oftener evidently on a reconnoitering expedition. Today I spent some time carefully noting them as they circled round and round among the tree-tops. There were four of them. After a low, and often many times repeated flight thru one particular tree-top, during which the head was rapidly turned from side to side in a keen scrutiny, the bird returned and snipped off a twig with its feet, then flew directly to the chimney, returning after a little and repeating the performance. In every instance the twig was snipped off with the

feet, the head and fore part of the body being thrown up and back and the feet forward to meet the twig.

LYNDS JONES, *Oberlin, Ohio.*

EDITORIAL.

For the most of us the migration season has closed and the nesting season has well begun. This is the time when our study of bird movements stops because we take it for granted that there are no more movements to study until the southward migrations begin. But have you not noticed that already the grackles and blackbirds are gathering for their roosts, anticipating a change of habit if not a change of latitude? These roosts are worthy of study for their own sakes if not for the light they may throw upon the autumnal migration. But we shall never know just when the birds begin to move south unless the study of their movements is continued during the whole year. It is true that hot weather field work is a good deal like work, but the returns will amply repay any effort put forth. I wish we might have a large number of June horizons for the next BULLETIN with censuses of some of the common breeding birds in restricted areas. Such work carefully and systematically pursued would enable us to determine with some degree of accuracy the number of birds in any given area, and would furnish a basis for determining the decrease or increase of the species in that region. Investigations along this line are greatly needed in order to determine the effect of the changed condition and environment of the birds due to increasing population thruout the country. Even a little time each day given to this work will result in much valuable information.

The editor desires to issue the July BULLETIN before the close of the month, on account of absence from home during August, and requests that copy be sent in as early as possible. If each member will make it his duty and privilege to contribute something the editorial burden will be removed. The history of a bird's nest will be interesting and timely. Notes on the migration just closed, notes on roosts, notes on the plumage of young birds, as well as countless other subjects are always welcome.

The editor is comfortless because his boon companion and fellow enthusiast in the study of the birds, Mr. (Rev.) W. L. Dawson has gone to his work in Yakima County, Washington. But we have his promise

of whatever that new country has to offer in bird life for the BULLETIN. We envy him the field with its new fauna and flora, its mountain fastnesses, distant horizon and clear atmosphere. But there are still years to come. We shall see that pastorial work and the study of birds are entirely compatible in this new region.

PUBLICATIONS RECEIVED.

The Birds of Indiana. By Amos W. Butler. A Descriptive Catalogue of the Birds that have been observed within the State, with an account of their habits.

The Introductory part of this sumptuous catalogue of 672 pages, discusses the reasons for its appearance, the sources from which the information which it contains has been drawn, followed by "The Indiana Bird Law," "Position of Boundary" [of the state], "Elevation," "Physiographic Regions," "Drainage," "Physiographic Features," "Peculiarities Affecting Bird Distribution," "Changes in Bird Life," "Destruction of Birds." "Zoological Areas," "Bird Migration," and finally an extensive "Bibliography of Indiana Ornithology." The systematic part of the work then begins with a key to the orders, followed by a key to the families under the orders, which, as the author states, are taken from Robert Ridgway's Manual of North American Birds. The addition of references to the pages where the orders and families are treated in detail would add to the usefulness of these keys without making them more complicated. The illustrations are largely taken from Coues' Key to North American Birds, and from the publications of the U. S. Agricultural Department.

The author's treatment of the individual species is consistent thruout, enabling one to turn at once to any desired part of the discussion of the species without waste of time. The specific references to the different counties in which the species occurs, and its mode of occurrence if it be a rare or unusual species, is a step in the right direction. It does not cumber the book with useless matter for any reader because the descriptive matter precedes it. Any catalogue of the birds of any state would be incomplete without at least mention of any differences in habits in different parts of that state.

The catalogue was not designed to serve as a text-book, but rather as a work of ready reference for the farmer and the gardner or fruit grower. To him who is interested in local and state lists a summary at the end of

the catalogue would add value. The writer realizes that these summaries may sometimes seem almost like boasting of the size of your list, but its real usefulness should outweigh this seeming objection. This catalogue is one which those having in preparation local or state catalogues would do well to study with reference to the order of compilation and the general make up, where they are not intended for special uses. In this work Professor Butler has given us a more than usually valuable contribution to the science of Ornithology.

American Monthly Microscopical Journal, The. Vol. XX, No. 4 and 5.

Birds and All Nature. Vol. V, Nos. 3, 4, 5.

Bird-Lore. Vol. 1, No. 3.

Book Reviews. Vol. VII, Nos. 4 and 5.

Bulletin of the Cooper Ornithological Club. Vol. I, No. 3.

Bulletin of the Michigan Ornithological Club. Vol. III, No. I.

Bulletins 99, 100, 101, 102, 103, Ohio Agricultural Experiment Station.

Bulletin of the Scientific Laboratories of Denison University. Vol. XI, Articles IV to VIII inclusive.

The Fern Bulletin. Vol. VII, No. 2.

Fourth State Catalogue of Ohio Plants, by W. A. Ketlerman, Ph. D. University Bulletins, Series 4, No. 10. (Botanical Series, No. 1.)

Hummer, The. Vol. I, No. 1.

Importance of Establishing Specific Place-modes. By Chas. B. Davenport. Reprinted from *Science,* N. S., Vol. IX, No. 220, pages 415-416.

Journal of Applied Microscopy. Vol. II, Nos. 2, 3, 4, 5.

Museum, The. Vol. V, Nos. 6 and 7.

North American Fauna. No. 14.

Odonata of Ohio. A Posthumous Paper. By David S. Kellicott, Ph.D.

Sandusky Flora. By E. L. Moseley, A. M.

Sportsman's Magazine. Vol. III, Nos. 3, 4, 5.

Transactions of the Texas Academy of Science for 1898. Vol. II. No. 2.

SOME WESTERN HORIZONS. No. II.

The last stop on the overland trip was made at Julesburg, a prairie hamlet in the north-eastern corner of Colorado. Here the Platte River struggles with its shifting sands, and low bluffs follow the general trend of its course on either side. The rest is just prairie and wind. I mention the wind because on the day of our visit there was about twice as much of it as there was of prairie and it had more to do with ornithological operations. Altho it was the 17th of May, the wind was so strong and so searching that I frequently lay down on the ground to rest and get warm.

The willow-clad islands of the Platte afforded some protection for the birds, and it was here that most of them were found. These islands are a characteristic feature for many miles. They consist of a core or raised portion covered with thick, stunted scrubbery, such as rose brier and Labrador tea, with a willow fringe surrounding the whole. Between these islands the river flows or not according to its high pleasure and the season of the year. From the midst of one of these patches I put up an American Bittern from a nest containing two eggs. The nest consisted merely of a trifling amount of grass scratched together.

The one impressive feature of this day's experience of bird life was found in the Lark Bunting. He was everywhere, and always a pleasant sight. He is made for the prairie, and it makes no difference to him if it is a wind-swept prairie. Ever and anon he launches into the wind and flutters up some ten or twenty feet, singing the while, then he makes a parachute of his wings, bat fashion, or like a V, and settles to the ground again, still singing. The song is not loud but is a pleasing repetition of several very different phrases. By phrases I mean a short succession of notes of one quality. Thus one phrase will consist of four similar double notes, "*We'o, we'o, we'o, we'o,*" and another, perhaps immediately succeeding, will be a trill like that of the Grasshopper Sparrow. Evidently the buntings were not nesting yet as there were ten males to be seen to one female. Besides, several mixed flocks of forty or fifty birds were seen, and these were manifestly late arrivals.

The following horizon of twenty-nine species was observed between 4:30 P. M., May 16 and 4:30 P. M., May 17.

THE JULESBURG HORIZON.

American Bittern.
Western Sandpiper.
Solitary Sandpiper.
Bartramian Sandpiper.
Spotted Sandpiper.
Killdeer.
Belted Piping Plover.
Mourning Dove.
Marsh Hawk.
Swainson's Hawk.
Burrowing Owl.
Kingbird.
Desert Horned Lark.
Cowbird.
Red-winged Blackbird.
Western Meadowlark.
Western Vesper Sparrow.
Western Grasshopper Sparrow.
Western Lark Sparrow.
Clay-colored Sparrow.
Lark Bunting.
Purple Martin.
Barn Swallow.
Tree Swallow.
Yellow Warbler.
Western Yellow-throat.
Yellow-breasted Chat.
Brown Thrasher.
Short-billed Marsh Wren.

W. L. Dawson, *Ahtanum, Wash.*

NOTES ON THE COMMON TERN.
STERNA HIRUNDO.

It has been my privilege to spend six weeks in the laboratories of the U. S. Fish Commission at Wood's Hole, Mass., this summer. A pressure of work on invertebrates has not given much time for birds, but some opportunities did come to study the terns.

The Common Tern is abundant at Wood's Hole and it would hardly be possible to look out over the water in any direction on a summer day without seeing at least one and more likely a half dozen or more of these beautiful birds wheeling and circling here and there, every few minutes dropping like lead head first into the water in a seemingly tireless search for something edible. They are a never failing source of delight to a bird lover.

Among the few colonies of terns on the Atlantic coast that still survive the ravages of the millinery trade are two near Wood's Hole. A large one is at Perkin's Island and a smaller one at Wocpecket Islands.

It was my good fortune on July 20th to accompany Mr. Frank M. Chapman on a trip to Penikese Island, not with guns and egg cases but carrying cameras, tripods and plate holders. A two hour ride on the

Fish Commission steam-launch *Merganser* brought us to the island, and we had the grand sight of thousands of graceful terns swarming over a rather small island. Their shrill cries made a perfect bedlum, and occasionally but not often the deeper squawk of a Roseate Tern (*Sterna dougalli*) was heard. On a low flat, uncovered at low tide, were seen hundreds of Common Terns with a number of young first plumage birds, and, out in shallow water, groups of a score or more could be seen splashing and flapping their wings in very evident enjoyment.

A short walk past the ruins of the old Agassiz laboratories brought us to the nests which were scattered over several acres of ground and were often not more than a yard apart. Eggs and young in all stages were very abundant, but we were sorry to note the large percentage of broken eggs and dead nestlings. In spite of the attempts of the owners of the island to protect the terns, there has been some shooting, and it is reported that fishermen from Cuttyhunk carry off a good many eggs for table use. Some sheep were wandering over the nesting ground, nibbling grass, and they may sometimes trample on the eggs and very young birds, though their presence did not seem to occasion alarm, and we saw a couple of terns perched for several minutes on the backs of sheep and neither sheep nor terns seemed to regard the situation as novel. We were informed that a severe storm some days previous had wrought great havoc in the colony.

We spent several delightful hours studying the terns, and were loth to leave the island when the pilot informed us that we must start back as a wind was rising and it was getting late.

Our presence was naturally the cause of great alarm among the parent terns and they swarmed overhead in great distress. Some of the more anxious would swoop past within a few feet of our heads, scolding fiercely. When we retired some distance, things became more quiet and one by one the birds resumed their nests. The pretty sight of these beautiful birds sprinkled over the short grass for rods and rods was something long to be remembered.

Mr. Chapman took a number of pictures and they doubtless will appear in *Bird-Lore* or in the beautiful series of lantern slides which Mr. Chapman uses in his charming lectures on birds.

The downy young leave the nest when disturbed, but are not able to go far for a few days, and they never become active on foot like young Sandpipers. When a little older, the young terns may be found squatting on the ground, or among rocks if on the beach, with the head hidden in

fancied security. Once fully convinced that he is seen he waddles off and never stops until out of sight.

I brought back with me a young *hirundo* almost ready to fly. It very soon learned to take fish from my hand, and always manipulated them so that they were swallowed head end first. A four inch cunner was swallowed whole. Morsels too large to be handled entire were soon dropped. When exceptionally large pieces of fish were swallowed, some very interesting muscular movements took place. A telescope motion of the neck and body was accompanied by a spasmodic movement like that of shivering, for a few seconds. The bird would then "huddle up" and ruffle up its feathers several times.

When in an open place, the bird would frequently raise its wings above its back in the motion of flight and in a couple of days could rise several inches from the ground in this way.

Unfortunately, my pet grew very noisy in the course of a few days and I had to keep him out doors. The following morning he disappeared, and I know not how or when he went. An intersting study of the development of the color patterns of the first plumage was thereby interrupted, but a few facts had been noted. The general coloration of the upper parts, as seen from above, consisted of mottled grays and browns. The primaries, however, have the adult coloring of light bluish gray. As the bird is seen crouching on the ground the primaries are not conspicuous, being folded against the sides of the body, and the upper, probably primitive coloring, is far less conspicuous than the sharply contrasting black head and ash gray back of the adult. The eggs and downy young are admirable illustrations of the principles of protective coloration. The downy nestling with light brownish coloration above, very easily escapes notice even when in the nest, so long us he lies on his breast. The dead nestlings, however, when they lie on their backs, by reason of their light ventral coloration are quite conspicuous against the darker ground. Even the bill and feet show protective coloration as they are a plain brownish and lack the bright red of the adult.

R. M. Strong, *Wood's Hole, Mass.*

SUMMER BIRD STUDY.

If indications count for anything, the summer days, with their dense foliage, swarms of mosquitoes, and debilitating weather, are days of almost total inactivity with the average bird student. We are only too

willing to take for granted that work and study at such a time is too unprofitable to be indulged in. It may not be wholly out of place here to show briefly what a class of twelve students has been able to accomplish during a summer term of eight weeks, just closed.

There were one hundred and eight hours of field work required, eighty-eight of which was done under the personal supervision of the teacher. Eighteen trips, including two all day trips, made up the eighty-eight hours. All times of day, from four o'clock in the morning to eight at night and all temperatures between 48° and 96° in the shade, are represented in this work.

During these eighty-eight hours ninety-two species were recorded and 734 records made. Of these ninety-two species the highest number recorded was sixty-nine during an all day trip on July 24, and the lowest number was nineteen, in the face of a thunderstorm on the evening of August 3, the average record being forty-one species.

The following species were recorded on each of the eighteen trips: Chimney Swift, Mourning Dove, Red-headed Woodpecker, Kingbird, Crow, Blue Jay, Meadowlark, Goldfinch, Song, Field, Vesper and Chipping Sparrows, Purple Martin, Barn Swallow, House Wren and Robin; and the following species were recorded but once: Common Tern, American Bittern, Sora, Red-bellied Woodpecker, Nighthawk, Traill's Flycatcher, Lark Sparrow, Dickcissel and Blue-winged Warbler. Only six of the remaining eighty-three were not well seen and easily studied. It is interesting to note that thus far in 1899 but ninety-eight species have been recorded as breeding within the county, so that the summer's work is nearly complete.

During the all day trip of July 24, when about thirty-five miles of country roads were covered, a careful count was made of the number of individuals of twenty-one species seen from the wagon. The day was one of the warmest of the year, with but a light breeze from the south, and a cloudless sky. The list follows:

Common Tern, 3.
Green Heron, 1.
Spotted Sandpiper, 2.
Killdeer, 4.
Mourning Dove, 16.
Cooper's Hawk, 1.
Sparrow Hawk, 5.
Belted Kingfisher, 3.
Red-headed Woodpecker, 35.
Flicker, 15.
Chimney Swift, 48.
Crow, 16.
Meadowlark, 75.
Song Sparrow, 48.
Grasshopper Sparrow, 1.
Field Sparrow, 20.
Loggerhead Shrike, 3.
Purple Martin, 22.

Catbird, 12.
Bluebird, 8.
Wood Thrush, 2.

This was the day on which sixty-nine species were recorded, the most of them without leaving the wagon.

Another all day trip, on July 10, under a threatening sky, a temperature ranging below 70, with a brisk north-west breeze blowing, resulted in the following record for twenty-one species:

Bartramian Sandpiper, 4.
Red-shouldered Hawk, 1.
Downy Woodpecker, 1.
Belted Kingfisher, 2.
Kingbird, 77.
Phœbe, 1.
Wood Pewee, 35.
Blue Jay, 16.
Bobolink, 78.
Red-winged Blackbird, 66.
Bronzed Grackle, 37.
Goldfinch, 35.
Vesper Sparrow, 79.
Grasshopper Sparrow, 1.
Cardinal, 2.
Towhee, 1.
Cedar Waxwing, 2.
Barn Swallow, 400.
Louisiana Water Thrush, 1.
Redstart, 1.
Robin, 68.

On this trip much more time was spent in the woods and near the swamps in search of birds.

The opening week of the summer term gave evidence of an unusually advanced season, with small promise of much from the birds. Few of them were singing, while the most of them seemed to be in perpetual hiding; but as July grew old the songs began anew and the birds were far more willing to pose for the class. There was unmistakable evidence of change of plumage among nearly all species, often resulting in perplexing patterns; but many of the birds were in full breeding plumage, while some were still nesting, even among the earlier breeders.

The summer's work clearly shows that the student of birds cannot leave the summer months out of his study if he expects to cultivate a broad acquaintance with the birds. On the contrary, sustained study during the months of July and August is greatly needed before many problems can hope to be solved. Let there be more summer study.

Lynds Jones, *Oberlin, Ohio.*

ROSE-BREASTED GROSBEAK.

Up to the time I was fifteen years old I considered this a rare bird, though since then I find it not uncommon. That spring I found my first

nest a few miles from here containing three eggs. The nest was placed on one of the lower limbs of a cottonwood tree just at the edge of the timber which bordered on a small swamp. The nest was composed of some small twigs and fine grass, and, being not over eight feet up, the eggs were easily seen from below.

I saw no more of these birds until the 9th of May, 1893, when I saw three males in one of the trees near the house. They soon flew away, but one returned in a few hours and stayed near all day, evidently waiting for his mate. The next morning I heard him singing sweetly, and, looking out I soon saw that his mate had arrived. After this I saw them almost every day until the 25th, when I found them starting a nest in a crab-apple tree which grew not more than twenty-five feet from the house. I suppose I watched them too closely for they did not continue this nest long, but on the 30th went to work in a box-elder tree which grew near, and removed what they had built and added a little more to it.

The female did almost all the building herself though the male usually staid near. On the 4th of June the female laid her first egg and continued one egg each day until the set of four was complete. The birds took turns sitting, though I think the male did rather more than his mate. About noon on the 18th I heard the male making a strange noise, and, looking up, I saw him standing on the edge of the nest. He would draw himself up to his full height, then flutter his wings, and make the queer squeaking noise again. He would then put his bill down into the nest and seem very excited. I then climbed up to see what was pleasing him so, and there in the nest I saw that one little bird was hatched and another was struggling to get himself out of his shell. No wonder the old bird was so delighted! The next morning all four were out. They grew quite fast and on the 28th left the nest, although they were not very strong I do not blame them, for the nest was very thickly covered with insects which must have been very troublesome.

The summary would be as follows: From arrival till building began, sixteen days. From time second nest began till first egg laid, five days. Time of egg laying, four days. From laying last egg till hatching, eleven days. From hatching till birds left nest, ten days.

VIRGINIUS H. CHASE, *Wady Petra, Illinois.*

A BLOOD THIRSTY BLUE JAY.

One morning last week I heard some English Sparrows making a great

scolding in one of the cherry trees in our yard. An old Blue Jay, which had his nest not far off, was gulping down his breakfast of cherries, and several Sparrows were fluttering around him, with others perched in the tree. This continued for a few moments until the Blue Jay seemed to get angry and suddenly darted at one of the Sparrow, striking it in the side of the head with his bill and knocking it to the ground. The Jay at once dropped on it, and seized it as a dog does a rat, and began to shake it viciously, the other Sparrows watching the performance in speechless amazement. After killing it the Jay dragged it a short distance, but became frightened and dropped it. On picking the bird up, I found it to be a newly fledged Sparrow. There was a large hole in its head just behind the eye.

VICTOR P. CHASE, *Wady Petra, Illinois.*

1898 MIGRATIONS, OF KILLDEER, MEADOWLARK, BRONZED GRACKLE, ROBIN, BLUEBIRD.

I am happy to announce that the notes received in response to the call in the BULLETIN, when added to those received last year in response to a similar call, make it possible to report upon the migrations of last year as well as this. Reports have been received from the following twelve localities and persons:

Glen Ellyn, Ill. Benj. T. Gault.
Delavan, Wis. N. Hollister.
LaCrescent, Minn. Whit Harrison.
Wooster, O. Miss E. D. Roberts.
Mentor, Ohio. Rev. J. M. Keck.
Oberlin, Ohio. Lynds Jones.
Pontiac, Mich. E. B. Schrage.
Muskegon, Mich. C. D. McLouth.
Berwyn, Pa. Frank L. Burns.
Philadelphia, Pa. Russell Gray.
Portland, Conn. John H. Sage.
And for 1899 also.
Stillwater, Oklahoma. S. E. Myers.
Lincoln, Neb. Robb. H. Wolcott.
Pittsfield, Me. C. H. Morrell.

The call in 1898 included the Bronzed (or Purple) Grackle in addition to the four already mentioned. These reports are all from the northern parts of the country from Minnesota to Maine, and are sufficiently scattered to give a fairly good view of the migrations within a few degrees of latitude.

The three westernmost reports show that the Killdeer, Robin and Bluebird reached northern Illinois or southern Wisconsin at the close of the first week in March and reached Minnesota ten days later. The

Killdeer was not actually recorded at LaCrescent, Minn. until April 2. Meadowlark followed three days later and Bronzed Grackle a week later. The same species reached northern Ohio a day earlier than northern Illinois, and the Killdeer and Robin were seen at Pontiac, Mich., on March 9 and 8 respectively, but Bluebird on the 17th. In northern Ohio Meadowlark and Bronzed Grackle preceded the others by one day, but accompanied Bluebird into Michigan.

The reports from the extreme east must be given in detail because they are too scattering to be correlated, probably on account of the differences in longitude, therefore representing two streams of migration.

Killdeer reached Berwyn, Pa., on March 17. There are no other reports on this species.

Meadowlark passed the winter at Philadelphia and Berwyn, Pa. It reached Portland, Conn. on March 9.

Purple Grackle reached Berwyn, Pa., on February 10 and Philadelphia on the 13th. Bronzed Grackle reached Portland, Conn. March 8.

The Robin was first seen on February 12 at Philadelphia ; March 8 at Berwyn, Pa. ; March 14 at Portland, Conn. ; March 19 at Hanover, N. H.

Bluebird first appeared on February 5 at Berwyn, Pa. ; March 11 at Hanover, N. H. ; March 18 at Portland, Conn.

The data for a single year taken by itself throws little light upon the movements of these species in relation to each other, but the tendencies are at least suggested. Under especially favorable conditions all five species may migrate on the same day whether early or late, especially north of the winter range of all. But there is always the greater probability of seeing the Bluebird and Robin first, closely followed by the Meadowlark and Grackle, and lastly by the Killdeer.

A DOWNY WOODPECKER'S NEST THAT I DID *NOT* COLLECT.

One morning last spring, while collecting botanical specimens, I accidentally frightened a Downy Woodpecker from its hole. As the hole was too deep for me to tell what was in it, I returned with a saw and chisel in the evening, expecting to get a set of eggs. Approaching quietly, I heard the bird in the hole hammering away at a great rate. I at once decided the bird had not finished digging its hole, and probably ten days later would be soon enough to look for a full set of eggs.

Ten days later I returned and was not a little surprised to hear a hole

full of young ones, crying lustily for food. Judging from their voices I should think they were nearly a week old. This is pretty good evidence the Downy don't always finish one job before beginning another, and must have still been at work enlarging the nesting cavity until the time the eggs were nearly ready to hatch—or it is *possible* just at that particular moment it may have been after some insect boring in the trunk of the tree. In either case I was neatly fooled out of a set of eggs.

VIRGINIUS H. CHASE, *Wady Petra, Illinois.*

THE EFFECT OF A STORM UPON THE BIRDS.

The following letter is of so much interest that the editor takes the liberty of reproducing it in print, altho it comes in the form of a personal letter giving information about the migrations.

The first appearance of both Robins and Bluebirds occurred March 15. One Robin and two Bluebirds were seen on that date. A heavy snow-storm came next day and everything was covered with ice for ten days. All birds suffered severely during this period. Crows came into people's yards; an Acadian Owl was found exhausted in the high-way, taken in and an effort make to save its life, but in vain. An examination of its body showed clearly that it died of starvation. The Robins and Bluebirds either died or went south, and nothing was seen of them again until April 1st, when they suddenly became common. The tide of returning birds had evidently been increasing along the southern limit of snow, and when the snow began to disappear during two or three warm days, the birds came in unusual numbers, for the first real flight. Both robins and Bluebirds were here in maximum numbers April 5th, and on April 11th the Bluebird flight was over, only summer residents remaining. Robins remain abundant.

NED DEARBORN, *Durham, N. H.*

JUNE CENSUSES.

EDITOR BULLETIN.—On the 13th of June, 1899, I find the following occupied birds' nests on and around my farm buildings, which consist of one dwelling, two barns, and other out buildings, encompassed in a space fourteen by sixteen rods. Said space contains forty-six trees: Maple, Cottonwood, Elm, Oak and Balm of Gilead, from forty to sixty

feet in height, with smaller trees of Pine, Cedar and Hemlock intermixed. On the barns were thirty-nine nests of Cliff Swallows and one nest of Barn Swallows. In the currant brush, one Chipping Sparrow. In the trees, one Warbling Vireo, two Baltimore Orioles, two Orchard Orioles, one Robin, one Blue Jay, one Mourning Dove, one Bronzed Grackle, one Flicker, one Redheaded Woodpecker and one Kingbird; in all thirteen species, fifty-three nests. Can any of the readers of the BULLETIN make a better showing of Peaceful Neighbors.

J. N. CLARK, *Meridian, Wis.*

Other work so occupied my time during the whole of June that the plan to make a census of some unusually good piece of woods had to give place to a much less pretentious and far more restricted plan. Two town lots were selected, one situated well within the residence part of the village, a quarter acre of land, with the house and oil shed, a dozen old apple trees and two small peach trees, an osage orange hedge along the whole west end of the lot about fifteen feet tall, and a considerable potato patch. Passing over the two English Sparrow's nests that were destroyed after incubation had begun, there was just one nest of House Wren on the lot. A Flicker had tried to dig a hole in one of the old apple trees, and a Hairy Woodpecker in another one, but found the small boy a too interested spectator. However, Song Sparrows, Robins, Mourning Doves, Flickers, Hairy and Downy Woodpeckers, Bronzed Grackles, Chimney Swifts and Barn Swallows were regular and frequent visitors to the lawn and trees.

The other lot lies on the north-western outskirts of the village a half mile from the business center, with all outdoors to the north, a twenty rod open space in which lies a corn field, to the west, an open field to the south with an orchard beyond, and houses continuously to the east. The premises comprise the house and large barn with other outbuildings, an orchard containing about forty trees of ten years' growth, besides grape vines and small fruit, ten maple trees and several ornamental trees and shrubs in the yard, evergreen trees making two wind breaks north and west along the whole side of the lot: all together an acre of ground. A most careful search of these premises revealed just one Robin's nest! At this writing it would not be profitable to give a list of the species which frequent this place. That can better wait.

LYNDS JONES, *Oberlin, Ohio.*

MARTINS KILL THE CATERPILLARS.

We know that the members of the Swallow family are insect eaters and must therefore be entirely beneficial to agricultural interests, but we really attach scanty importance to what they actually do in the way of keeping down the insect pests until the facts are forced upon us by some concrete instance. Many a farmer or gardner or fruit grower has seriously questioned whether the good they do after all compensates for the litter which they are likely to leave about the out-buildings. When new, the nests are objects of beauty, but in time they will crumble away, scattering dirt and mud about in just the wrong places. Too often the person benefitted fails to perceive the benefit because he has never known the time when the swallows or martins were not a part of the furnishing of his premises, or he has entirely forgotten the changed conditions since the birds came to live with him. A concrete case of the real utility of the Purple Martin comes to me in a clipping from the *Daily Kennebec Journal*, under the caption of this article. It is so good that I quote it entire with the earnest plea that all skeptics as well as all others who have not already provided for the entertainment of the Martins should do so without further delay.

Editors Kennebec Journal:

If you will allow me a little space in your agricultural columns I will tell you what little I know to be a fact in regard to keeping caterpillars and other worms and grubs from our apple trees.

I have a small orchard near my house and my neighbors have the same adjoining mine. Through all the caterpillar years for fifteen years past these orchards have had but a very few caterpillar nests in them. Last year there were but three nests in my orchard, while I had trees about three-fourths of a mile away that were completely covered with them and others were the same. Now the remedy.

Eighteen years ago I had a large martin house built and set it in the middle of my little orchard on a crotch pole about fifteen feet high. The house was large enough for fourteen pairs of martins. The second year every room was taken up by them and has been every year since.

These birds raise from four to six young to a nest. They arrive here from the eighteenth to the twenty-first of April, sometimes the snow would still be two feet deep around the martin house pole. But they come just the same and never vary from that time. They hatch their young about the middle of June and begin to fly about the middle of

July. So you see in July and part of August I have from seventy to eighty-five birds flying around my trees and my neighbors'. These birds get all their living on the wing, never going to the ground except to get material to build their nests. Their whole living is on millers and flies, and they are great feeders. They are on the wing nearly all the time when it does not rain, and they are especially busy just before sunset, when the caterpillar moths begin their work. These moths or millers lay their eggs the last of July or August, just the time when these birds are in best working condition and but very few winged insects escape them. This is the cause of my not having any caterpillars in my orchard, so I claim.

These birds invariably leave for parts unknown from the 18th to the 22nd of August. They are great singers in their way, and commence their songs about half past three in the morning. Perhaps some would not like that at first as it would disturb their morning repose; then put them further away in your orchard.

Now I believe if every one that had an orchard would put up from one to five martin houses among their trees they would rid them of caterpillars and many other insects that injure our apple trees. These houses do not want to be gaudy but plain, paint lead color if painted at all, high colors drive them away for a few years.

If any one decides to try this they must set their poles (which should be cedar), before the ground freezes and the house must be up before the 20th of April. Some of my neighbors are going to try it next spring, and I wish many others would. Why not have the air full of these beautiful birds about our home? Give them a home and they will come.

J. L. O.

GENERAL NOTES.

A Talented Catbird.—While walking along a hot, dusty road in the Great Chester Valley about 2 P. M. on May 22nd, the subdued call of the cock Quail issued from a shady grove extending to the roadside near New Centerville. Peering over the rail fence, I was at first unable to locate the sound, but presently espied the author—a Catbird close at hand. Perched between and parallel with the rails, he called *Bob-bob-white, bob-white-bob*, in a soft, dreamy whistle, seemingly rehearsing a love song or singing for his own edification, as the female was not present. After a few trials, he retired within the wood to scratch about

in the dead leaves for an insect or so; again mounting a rail, one more imitation of the Bob-white whistle was given, then as the trill of a Red-winged Blackbird came up from the swamp beyond, he changed to a shriller *chuc-che-e-e-e-e* without a moment's hesitation. I have not heard the Mockingbird in his native haunts, but nevertheless consider such correct rendition of alien song by a wild bird truly remarkable. I have passed this wood many times since but have heard no notes other than the characteristic *mew*, from the throat of this accomplished mocker.

FRANK L. BURNS, *Berwyn, Penna.*

I have noticed several accounts lately of birds killing themselves by flying against houses, etc. I believe it was in a copy of the *Observer* that I mentioned an instance of a Bob-white doing this, and since that time a couple of other instances of the same kind have come under my notice. Last fall a lady brought me a Yellow-billed Cuckoo which she said had fallen against the floor of her porch with such force that it killed itself. When I examined it I found that the bill was broken in several places and the skull was badly bruised. She said the accident occured in the middle of the afternoon. A few days ago while some lawyers were talking in an office, one of them said that one time while he was standing in the court room after court had adjourned, talking with another lawger, a Bob-white flew against the window with such force that it penetrated the glass and fell on the floor of the court room. It seemed stunned for a while but soon recovered.

SIDNEY S. WILSON, *St. Joseph, Mo.*

EDITORIAL.

Contrary to predictions and expectations, the present issue is late instead of early. First, because of other work that could not be put aside; second, because of too little copy; third, because the editor's plans to be away from home during August miscarried. Instead he will rest at home while working out some problems in moulting and song. But he will be gratified to receive contributions for the September number at any and all times until the 25th of that month.

There is not yet enough material upon the migrations of the "Blackbirds" to make a report profitable. A little prompt attention to this small matter will ensure an interesting comparison.

The June census is not greatly in evidence in this issue, but would be scarcely less appropriate for the next one. Let them come in. We shall never know what our bird population is until we count at least a part of it as a basis for estimates. If I did not feel that there was great need of this sort of work *now* I would not urge it so persistently. If it could be done even approximately for every section of every county of every state of this whole country what a basis for future study and estimates it would furnish! Cannot we hope to accomplish some small part of this this year? It is not yet too late.

PUBLICATIONS RECEIVED.

American Monthly Microscopical Journal, The. Vol. XX, No. 6.

Birds and All Nature. Vol. VI, No. 1.

Bird-Lore. Vol. I, No. 3.

Book Reviews. Vol. VII, No. 7.

Bulletins 104, 105, 106, 107, Ohio Agricultural Experiment Station.

Bulletin of the Cooper Ornithological Club. Vol. I, No. 2.

Bulletin of the Michigan Ornithological Club. Vol. III, No. 2.

Carnegie Library of Pittsburgh. Monthly Bulletin. Vol. IV, Nos. 6, 7. Third Annual Reports, for the year ending January 31, 1899.

Cornell Nature-study Bulletin. No. 1.

Danger of Introducing Noxious Animals and Birds, by T. S. Palmer. Reprint from Yearbook of Department of Agriculture for 1898.

Fern Bulletin, The. Vol. VII, No. 3.

Hummer, The. Vol. I, No. 2.

Journal of Applied Microscopy. Vol. II, Nos. 6, 7.

Journal of the Maine Ornithological Society. Vol. I, No. 3.

Maine Sportsman. Vol. VI, Nos. 70, 71.

Mineral Collector, The. Vol. VI, No. 4.

Museum, The. Vol. V, Nos. 8, 9.

Sportsman's Magazine. Vol. III, Nos. 6, 7.

Yearbook of the Department of Agriculture for 1898.

WANTED! I wish very much to obtain the loan of skins of *Lanius ludovicianus* and *L. l. excubitorides* collected in the northern and eastern states. Expense of shipping and good care will be guaranteed. R. M. STRONG, *11 Mellen Street, Cambridge, Mass.*

WANTED! Keeler's Evolution of Colors, Newton's Dictionary of Birds, Vols. 3 and 4. Almost any of Thoreau's, Burrough's, Miller's, or Bolle's works, odd numbers Ornithological papers, skins of the Genus *Colaptes*. Can offer Davies' Taxidermy, set 10 Vols., Americanized Encyclopedia Britannica, '92, morrocco, 9200 pages; Maynard's Naturalists' Guide, etc., 100 numbers scientific papers, and possibly eggs, skins, or cash. Lists exchanged. F. L. BURNS, *Berwyn, Penna.*

ABNORMAL EGGS. More data and specimens wanted. Parties who have opportunity, the coming season, to take sets containing runts, extremely large, abnormally marked or unmarked, albino, or distorted eggs will do well to write me. I will pay cash or give good exchange for such. J. WARREN JACOBS, *Waynesburg. Penna.*

WANTED! I will pay cash for the following publications: *Curlew*, any and all numbers. *Ornithologists' and Oologists' Semi-Annual*, Vol. I, No. 1, Vol. II, No. 1. BULLETIN (new series) Nos. 1, 2, 3, 4. Copies must be unbound and in good condition. Address, LYNDS JONES, *Oberlin, Ohio.*

EARLY SUMMER HORIZONS FROM MILTON TOWNSHIP, DUPAGE COUNTY, ILLINOIS.

With a desire to respond to our editor's request for "June horizons," and also to ascertain in a measure the standing of our breeding birds, a number of trips were arranged by the writer in June, and one during July, of the present season of 1899, to widely separated parts of this township. A few late May records taken at Glen Ellyn were also thought desirable to include as well.

Briefly, the County of DuPage may be described as a prairie county, rolling generally in character; this marked feature of its make-up perhaps reaching its best development right here in Milton, the most central of its townships. The drainage of this particular locality lies chiefly in the direction of the East DuPage, a now rather insignificant stream flowing in a southerly course from here, but doubtless of no little importance during the early period of its career. The valley proper of the East DuPage is rather depressed and from one-eighth to nearly a mile wide in places. This statement may be repeated when referring to the West Branch of the DuPage River, and will also hold true to a certain extent with Salt Creek, a tributary to the DesPlaines River, a few miles to the eastward of Glen Ellyn.

The surface of the entire county, the geologists tell us, is of Morainic origin, being fully attested to and well illustrated in the sedementary and gravelly ridges bordering the streams. There are also other evidences of the drift, or ice period, at hand in the numerous surface boulders distributed here and there throughout the entire section. In addition to the smaller creeks tributary to the river and its branches, there are several systems of disconnected sloughs, each trending in one or another direction towards the natural drainage outlets, and marking the courses at present of all that now remains of ancient glacial feeders.

The forest growth of this section, somewhat sparse, is in the main confined to these several ridges and elevated flats bordering the streams and at the present time made up of detached groves, owing to much of the original woodland having been cut into and materially reduced and changed in area during the time in which the county has been settled. Still when we take into consideration the orchards, hedges and shade trees,

now scattered quite regularly throughout the cultivated tracts, it is questionable if the county does not contain now a larger tree growth on the whole than when the same lands were held by the Indians or during the period of frequent prairie-fires.

The village of Glen Ellyn is located in and bordering on one of these groves, and from the hilly, wooded and generally picturesque character of the country in its immediate vicinity, has been likened by some to a wooded oasis situated among fertile but otherwise uninteresting fields. This latter statement, however, may appeal to some, but not altogether to the naturalist, for we all appeciate the agreeable change at times from wood-land to fields and vice versa. Within the village limits is an artificial lake of some dimensions, covering perhaps thirty acres and more —an attractive spot for passing water-fowl in season.

Our spring and fall migrations will average each about 130 species, with a summer or breeding list of one-half that number.

A trip on the 18th of June took me to Mitchell's woods in section 34 at the southern end of the township, passing through sections 11, 15, 22 and 27, thence through sections 35 and 36 to the Lisle woods and then north along the creek (as we call the East Branch of DuPage River) through sections 25, 24, 13 and 14 home. A late start, at 9 A. M., was made and the day being fair and warm (94° at 2 P. M.) not as many individuals and possibly species, were recorded as would otherwise have been the case had an earlier start been made and the day cooler. My trip took me south through the fields and following up a system of sloughs. Within a short distance from my home the following were recorded, viz. :

Mourning Dove, 2. Meadowlark, 2. Bronzed Grackle, 1. Martin, 6, White-rumped Shrike, 1. 12 in all.

In hedges and fields adjoining the village : Mourning Dove, 2. Flicker, 1. Wood Pewee, 1. Prairie Horned Lark, 5. Bobolink, 13. Meadowlark, 3. Bronzed Grackle, 4. Goldfinch, 2. Song Sparrow, 1. Dickcissel, 5 White-rumped Shrike, 3 (one adult followed by two young). Warbling Vireo, 1. Brown Thrasher, 3. 44 in all.

In fields between Glen Ellyn and Mitchell's woods, the species from now on being given as listed and without any attempt at classification, viz. : Flicker, 1. Robin, 2. Red-winged Blackbird, 6. Song Sparrow, 1. Bronzed Grackle, 4. Red-winged Blackbirds, in sloughs Nos. 33 and 4, 10 males. King Rail, calls, 1. Bartramian Sandpiper, 3. Long-billed Marsh Wren, 2 in slough No. 4. Also Red-winged Blackbirds feeding young out of nest, 4. Red-winged Blackbirds in slough No. 5,

10. Black-crowned Night Heron, 1 in slough No. 6. Several Dickcissels, 3 near by and one Bartramian Sandpiper, 1. Flushed two King Rails here, 2. Five more Dickcissels in same locality, 5. Also six Bobolinks, 6. Total 62.

Approaching Mitchell's woods: Crow, 10. Grasshopper Sparrow, 1. Vesper Sparrow, 1. Field Sparrow, 1. Scarlet Tanager in song, 1. Cowbird, 1. And my old favorite, which I have not recorded in two seasons past, the Lark Sparrow, 1. Total 16.

In Mitchell's woods, 12 to 1 P. M., while resting and eating lunch, the following heard: Indigobird, 1. Oven-bird, 2. Red-eyed Vireo, 5. Total 8.

Passing hurriedly through these woods, the following heard or seen: Kingbird, 2. Flicker, 1. Catbird, 1. Blue Jay, 1. Crow, 5. Wood Pewee, 1. Total 11.

Approaching the creek-bottom, I had occasion to cross a wet, grassy place, and found there two Savanna Sparrows chipping near me, each with food in its bill and evidently the parents of young close at hand. Four Barn Swallows, 4, were seen here passing back and forth over the same ground and also over the creek close by. As the day was very warm at this time quietness reigned along the creek, two Crows, 2, only being seen. Near the Lisle woods I heard the Bluebird's call, 1. In the creek-bottom, Song Sparrows, 3. Another Savanna sings, 1, and three Maryland Yellow-throats, also in song, 3. Bobolinks again to the number of 5. Catbird on nest beside its mate, 2, in cornus, willow and wild grape-vine thicket bordering the creek. An Alder Flycatcher, 1, seen here, and one Indigobird in song, 1. Total 25.

Going hastily through the Lisle woods the songs of many (at least ten) Red-eyed Vireos were heard on all sides, and several Indigos (six at least) greeted me. Four more Crows, 4. Red-shouldered Hawk, 1. Blue Jay, 3. Crested Flycatcher, 1. Three Black-crowned Night Herons, 3, (one young among them) flushed from button-bush swamps. A Green Heron, 1, calls near by in those notes which so much resemble the casting down of rail-road track iron in the distance. Downy Woodpecker, 1. Scarlet Tanager, 2, in song. Yellow-billed Cuckoos, 2, call. Red-headed Woodpecker, 2. Ovenbird, 2. Total 38.

Journeying northward along the river, little attention being given to several small groves of timber through which I passed, the birds of the marsh and field again being my specialty. Dickcissel, 8. Grasshopper Sparrow, 1. Savanna Sparrow, 3. Brown Thrasher, 1. Black-crowned Night Heron, 1. Henslow's Sparrow, 1. Meadowlark, 5. Bobolink, 2.

Bartramian Sandpiper, 1. Short-billed Marsh Wren, 2. Flicker, 4. Goldfinch, 2. Crows, a flock of 33 on fence near the creek. Maryland Yellow-throat, 4. Song Sparrows, 3. Crows again to the number of 5. King Rails call, 1. Long-billed Marsh Wren, 2. Kingbird, 1, and a roost of about 300 Blackbirds made up in the greater part of Red-wings and a few Bronzed Grackles (six being seen) in slough, the birds still coming in at 7:30. Seven Barn Swallows, 7, seen here, and at dusk two Vesper Sparrows, 2, in song. Total, 395.

On the evening of June 21st during fifteen or twenty minutes spent at our lake, the following were seen or heard : Kingfisher, 2. Black-crowned Night Heron, 1. Green Heron, 1. Baltimore Oriole. 1. Song Sparrow, 1. Scarlet Tanager, 1. Catbird, 2. Blue Jay, 3. Swift, 3. Martin, 6. Barn Swallow, 7. Wood Thrush, 2. Total, 30.

A business trip on the 26th of June took me to the north-eastern corner of the township. Time 3 to 5 P. M. The borders of one small grove visited besides cutting through the woods at east side of village. Aside from this what was recorded was observed from the highways. This trip took me through sections 11, 1 and 2 with results as follows : Wood Pewee, 3. Indigo, 7. Red-eyed Vireo, 2. Kingbird, 3. Song Sparrow, 7. Dickcissel, 8. Catbird, 8. Vesper Sparrow, 2. Mourning Dove, 10, and at least 35 at Ackerman's cattle-yard, where much corn in the ear was scattered upon the ground. Bobolink, 6. Red-winged Blackbird, 15. Flicker, 2. Red-headed Woodpecker, 1. Warbling Vireo, 1. Bronzed Grackle, 4. Robin, 6. Bartramian Sandpiper, 2. King Rail, 1. Yellow Warbler, 3. Blue Jay, 4. Goldfinch, 1. Crested Flycatcher, 1. Maryland Yellow-throat, 3. Crow, 6. Rose-breasted Grosbeak, 2. Baltimore Oriole, 1. Grasshopper Sparrow, 2. Total, 147.

June 29th I went to Chicago on business but returned home early in the afternoon, and having a little time to spare, it was put to good advantage in the fields north-west of the village. No timber lands were inspected on this trip, barring a few osage-hedges and some isolated clumps of willows and one of young basswood trees. Sections 10, 9, 4 and 3 were crossed over. Time 4 to 8 P. M. Within the corporation limits the following were noted : Dickcissel, 9. Meadowlark, 5. Bobolink, 4. Mourning Dove, 6. Grasshopper Sparrow, 3. Goldfinch, 2. Red-winged Blackbird, 11. Robin, 3. Kingbird, 1. Song Sparrow, 1. Bartramian Sandpiper, 2. Crow, 4. Bronzed Grackle, 4. Prairie Horned Lark, 2. Black-crowned Night Heron, 1. White-rumped Shrike. 1. Total 59.

In fields beyond, one small slough and some low meadow-land

visited: Dickcissel, 15. Meadowlark, 15. Robin, 1. Bobolink, 14. Mourning Dove, 7. Bartramian Sandpiper, 11. Crow, 3. Bronzed Grackle, 5. Prairie Horned Lark, 6. Black-crowned Night Heron, 5. White-rumped Shrike, 4 (two of which young in care of parents). Warbling Vireo, 1. Red-headed Woodpecker, 1. Flicker, 1. Swift, 1. Red-winged Blackbird, at least 45. Barn Swallow, 20 Henslow's Sparrow, 2. Grasshopper Sparrow, 5. Alder Flycatcher, nest and 4 eggs in clump of small basswoods growing on the top of a gravelly knoll near a low meadow containing small bunches and single willows of such species as *S. nigra*, *amygdaloides*, *longifolia* and *discolor*. Both birds were seen besides two others which were afterwards heard in an osage-hedge while on my way home, 4. Yellow-billed Cuckoo, 1. Wood Pewee, 1. Yellow Warbler, 1 juvenile. Kingbird, 4. Total, 173.

July 2nd, I visited a portion of the Lisle woods not inspected on my previous trip, some time being spent among the willow-thickets along the creek. A heavy thunder shower prevented much work in the woods. On starting out several Red-eyed Vireos, 4. Indigobirds, 3. Crested Flycatchers, 2. Towhee, 1. Wood Pewee, 1. Scarlet Tanager, 1. Goldfinches, 5, were heard in our own woods.

In Woods and fields along the way the following noticed: White-rumped Shrike, 1. Vesper Sparrow, 1. Bluebird, 2 juveniles Henslow's Sparrow, 1. Black-crowned Night Heron, 2. Alder Flycatcher, 4.

While lunching in a thicket of willows the following heard: Savanna Sparrow, 1. Song Sparrow, 1. Kingfisher, 2. Maryland Yellow-throat, 1. Dickcissel, 2. Catbird, 1. Meadowlark, 1. Alder Flycatcher, 1.

Along the creek the following seen or heard: Savanna Sparrow, 8. Flicker, 4. Song Sparrow, 1. Prairie Horned Lark, 3. Black-crowned Night Heron, 3. King Rail, 1. Long-billed Marsh Wren, 1. Short-billed Marsh Wren, 1. Henslow's Sparrow, 3. Maryland Yellow-throat, 3. Yellow Warbler, 2. Barn Swallow, 5. Total, 73.

In woods, many Red-eyed Vireos, (six at least). Crested Flycatcher, 1. Indigo, 3. Oven-bird, 1. Field Sparrow, 4. Towhee, 1. Red-tailed Hawk, 1. Returning home over same ground, no record kept of birds heard or seen beyond an additional Kingfisher at the creek. Total, 18.

The notes for late May refer to a few records made here on Decoration Day. Such for example as the Yellow-breasted Chat, 1. Prairie Hen, 1. Bartramian Sandpiper, 1. Black-crowned Night Heron, 2. Bittern, 1. Red-shouldered Hawk, 1. Indigo, 6. Catbird, 4. Scarlet Tanager, 3 Rose-breasted Grosbeak, 3. Baltimore Oriole, 4. Maryland Yellow-

throat, 1. Yellow Warbler, 1. Cedarbirds, a large flock of not less than 100. Mourning Dove, 1, with nest on ground in hay-field. Bobolink, 2, with nest on roadway. Total, 134. All within the village limits but not including anywhere near the number of species observed on that day, little time on the whole being given to birds.

These lists give without a doubt a tolerably fair estimate of our local ornis during the period of reproduction or early summer months—that is, in a rough way, for as is well known quite a number of forms not given here are known to nest within our limits. Indeed, the village of Glen Ellyn proper could furnish a half dozen such additional species and which easily could be augmented by special trips in quest of them to the neighboring parts of the township.

Such notable examples for instance are the Pied-billed Grebe, Least Bittern, Virginia and Sora Rails, Spotted Sandpiper, and possibly Killdeer, Hairy Woodpecker, Phœbe, Green-crested Flycatcher, Least Flycatcher, Chipping Sparrow, Yellow-throated Vireo, Redstart, House Wren, White-breasted Nuthatch and Chickadee.

The grand total of the number of units or individuals actually heard or seen on these several trips is 1245, and from which it is thought allowable to make the following deductions. But for our purposes of calculation we will call it in round numbers 1200. Of the thirty-six sections the county contains, fifteen of these were visited, my path not being doubled excepting in the last three trips where corresponding allowances were made. It is figured that my field of observation would naturally cover at least four acres at each notation, or twenty to each section; or, in other words, one-eighth of each section was gone over by these observations.

If twelve hundred individuals were the sum total in covering one-eighth of the territory represented by fifteen sections, a completed estimate of the entire field, based on the above calculations, would therefore yield 9600 individuals, or one-fifteenth of that, 640 to each section, which in my opinion is not only a low estimate, of the number of birds that should possibly be recorded, but is fifty per cent. less than should really exist there, for the reason that my notes are confined almost entirely to the seeing or hearing of male birds alone, therefore the females and young are not taken into consideration thus far. Multiplying the 640 by 2 we have 1280 adult birds for each section, and 36 times this the magnificent showing of 46,080 for the entire township, or 414,720 for the whole county, which is made up of nine townships.

Yet this is not all; for, as has been said, these estimates affect only the

adult bird population. Dividing the net result given us thus far equally we have 207,360 pairs nesting within our limits; and, as the successful rearing of at least *two young* for each pair of adults must be regarded as averaging very low—the species simply reproducing itself—the summer or breeding census of DuPage County cannot fall very far short of one million birds.

That these figures are extremely conservative I have not the slightest reason to doubt, and still on the whole the writer is not prepared to say that "figures will not lie." Take our place of two and sixty-five hundredths acres for example and on which it was found that the following species nested the past season, viz.: Mourning Dove, 1 pair; Chimney Swift, 2 pairs; Kingbird, 1 pair; Blue Jay, 1 pair; Baltimore Oriole, 1 pair; Bronzed Grackle, 1 pair; Song Sparrow, 1 pair; Purple Martin, 14 pairs; Catbird, 1 pair; Robin, 3 pairs and House Sparrows, 2 pairs, or twenty-eight pairs all told, which means that they necessarily must have reared not far from one hundred young.

Just beyond the confines of our place and possibly within an area of ten acres our list could easily be increased by the addition of several pairs of at least six of the species above given, and, also in addition, several others that are not herein listed, as for example, the Red-headed Woodpecker, 1 pair; Flicker, 1 pair; Wood Pewee, 1 pair: Meadowlark, 1 Vesper Sparrow, 1 pair; Rose-breasted Grosbeak, 1 pair; Scarlet Tanager, 1 pair; Warbling Vireo, 1 pair; Yellow Warbler, 1 pair; Brown Thrasher, 1 pair, and Bluebird, one pair.

And still there are other facts that cause me to regard the foregoing figures as extremely low and which can be explained in part by the almost entire absence of several species otherwise known to be common and among which could be named the Red-headed Woodpecker, Chimney Swift, Prairie Horned Lark, Cowbird, Goldfinch, Towhee, Brown Thrasher and Robin which do not show up in anywhere near their normal numbers in the preceding lists. Neither does this take into account our large alien population of *Passer domesticus*.

However approximate these figures may be. they are considered never-the-less as a very excellent showing for a county of which fully eighty per cent. is cultivable farming lands and where not more than one-half of the remaining twenty per cent.—perhaps nearer six per cent. of Milton Township—taking into consideration orchards, hedges, etc., is occupied in any form as woodland.

It is well enough to add further that DuPage County is among the smallest counties in the state.

The following is a list of the birds given, as occurring in these horizons, with numbers opposite each, viz. :

Bittern, 1.
Green Heron, 2.
Black-crowned Night Heron, 19.
King Rail, 6.
Bartramian Sandpiper, 21.
Prairie Hen, 1.
Mourning Dove, 63.
Red-tailed Hawk, 1.
Red-shouldered Hawk, 2.
Yellow-billed Cuckoo, 3.
Belted Kingfisher, 5.
Downy Woodpecker, 1.
Red-headed Woodpecker, 4.
Flicker, 14.
Chimney Swift, 4.
Kingbird, 11.
Crested Flycatcher, 5.
Wood Pewee, 7.
Alder Flycatcher, 12.
Prairie Horned Lark, 16.
Blue Jay, 11.
Crow, 72.
Bobolink, 52.
Cowbird, 1.
Red-winged Blackbird, 401.
Meadowlark, 31.
Baltimore Oriole, 7.
Bronzed Grackle, 28.
Goldfinch, 12.
Vesper Sparrow, 6.
Savanna Sparrow, 15.
Grasshopper Sparrow, 12.
Henslow's Sparrow, 7.
Lark Sparrow, 1.
Field Sparrow, 5.
Song Sparrow, 19.
Towhee, 2.
Rose-breasted Grosbeak, 5.
Indigo Bunting, 27.
Dickcissel, 55.
Scarlet Tanager, 8.
Purple Martin, 12.
Barn Swallow, 43.
Cedar Waxwing, 100.
White-rumped Shrike, 10.
Red-eyed Vireo, 27.
Warbling Vireo, 3.
Yellow Warbler, 7.
Ovenbird, 5.
Maryland Yellow-throat, 15.
Yellow-breasted Chat, 1.
Catbird, 18.
Brown Thrasher, 4.
Short-billed Marsh Wren, 3.
Long-billed Marsh Wren, 5.
Wood Thrush, 2.
Robin, 12.
Bluebird, 3.
Total, 1245.

BENJ. T. GAULT, *Glen Ellyn, Ill.*

A HUMMINGBIRD'S NEST.

It was on Sunday, the 4th day of July, two years ago, that we discovered our first Hummingbird's nest. It was a mere bunch of plant down,

with only a few patches of litchen upon it, fastened tightly to a low branch of an apple tree near the fork of a small twig not more than ten feet above the ground. The Hummingbird—the female, of course; we never saw the male bird in the orchard;—came and went at irregular intervals, bringing a bit of plant down or a morsel of litchen too small for us to see usually; but the nest grew under our eyes, and by the end of the afternoon one side of the nest was nearly covered with the litchen. After disposing of the down or litchen Madam Hummer would settle down on the nest, her breast pressed closely against the inside of it, her wings and tail spread and her throat stretched over the edge, while with her long bill she smoothed the outside carefully, whirling her body around during the process as if on a pivot. After a few moments she would fly off to a dead twig in a tree near by, to make her toilet. There were three dead twigs which she seemed to prefer, as we never saw her sitting anywhere else but on one of these. Our unconcealed presence seemed not to disturb her in the least, although once, when she had put to flight two Downy Woodpeckers and a Catbird, who ventured too near her domain, she flew at us several times, almost brushing my companion's head. But we were not Downy Woodpeckers and she gave up in despair. All the next day she worked busily at the nest, and by evening one side was covered with litchen and the inside was smooth and snug.

The next morning we pulled the branch down and found an egg in the nest. Here was a progressive bird, bent on doing two things at once apparently; for all that day she wriggled and twisted and smoothed the nest, sitting on it only a few minutes at a time, never still a moment. She kept adding more litchen to the outside and by evening it was nearly covered. But the next morning the unfinished nest hung awry on the branch, the downy lining in tatters and the broken egg on a dock leaf below. The Hummingbird sat disconsolately near the ruins of her home, and fiercely assailed every bird that came near it. While she was busy driving off a male Goldfinch who was singing innocently in the vicinity, the female sneaked up the branch toward the nest, filled her bill with the soft material and flew off. When the Hummingbird returned she brought a short piece of something that looked like broom-corn in her bill, which she poked about in her tattered nest. Several times during the day we saw her do this, with what object we could not imagine. "Maybe it was a hummingbird's nail," suggested a baby of five to whom we told the story. But not even hummingbird's nails could mend the nest which disappeared bit by bit, carried off by the Goldfinch

or some other bird perhaps; and if Madam Hummer built another nest we did not find it, though we did find another one further up the slope with a vigorous nestling in it.

ETHEL DANE ROBERTS, *Wooster, O.*

MARTINS REMOVED TO THE "ZOO."

Remarkable intelligence was exhibited by a colony of martins which were transferred from this place to the Zoological Garden, in Philadelphia, a few days ago, the birds returning here and escorting their lost companions to the new home, where they occupy cozy quarters to the delight of the management of the garden and its patrons.

For many years the management of the Zoological Garden has been attempting to secure a colony of martins for the purpose of locating them in the institution, but every attempt met with failure The birds would not build in boxes erected and could not be coaxed to make their home in the garden in any manner, notwithstanding the efforts of the management.

Josiah Hoopes, of this place, some time ago became interested in the matter, and being a lover of the birds, determined to assist the management of the garden if possible in securing a colony. He had a fine one at his home and at once began arrangements for the removal of it to the new location, adopting a rather novel plan for the transfer. Early in the spring a large box was prepared for the birds when they should return to his home after the winter in the south. This box was so arranged that it could be lowered from its pole at will, and above the entrance to each apartment in it was arranged a little sliding door which could be dropped, thus imprisoning the birds. The birds came at the usual time this spring and commenced the building of their nests in the new box. They were not disturbed, laid their eggs and in due course of time little martins made their appearance. This was a few days ago and the time was due for the experiment of moving them, depending upon the love the old ones bore their young for its success.

A dark night was selected for the removal and a representative of the Philadelphia institution was sent for. He came here and the home of the birds was invaded. The shutters closing the entrances to the home of the birds were dropped, but a few of them failed to work and the alarmed birds escaped from the box. The house was lowered from its

pole and taken to the Zoological Garden, where it was erected in a new location, the managers hoping all would remain there.

Early the next morning after the birds were transferred an unusual commotion was noticed about the box by the keepers in the garden. The martins seemed to be holding a consultation and calling the roll in their own manner. Then they grouped about the box and there was a lot of chattering among them as though they were deciding some question of great moment. After this the entire colony of old birds, leaving the young in the box to care for themselves, rose in the air and flew away. There was consternation in the "Zoo" and it was decided that the attempt at removal had been a failure.

An hour after the birds had left Philadelphia there was a commotion on the Hoopes lawn. A large colony of martins were gathered there and they were chattering at a great rate. Occasionally another bird would join the assemblage. Finally all the birds rose and disappeared in a flock. Before noon there was happiness at the "Zoo." The martins had returned to their home and the colony was augmented by many new arrivals. The birds had returned for the ones which had escaped from their homes in the box the night before and had escorted them to their young. The birds are now located in the Garden and making their home their as though it were their original place of abode, and there is joy in the hearts of the managers.

The above is a clipping from a Philadelphia paper, sent by Mr. Frank L. Burns, and is of great interest in showing that wild birds can be transplanted.—[Ed.

LOUISIANA WATER THRUSH BREEDING IN CHESTER COUNTY, PENN.

While searching for the nest of a Worm-eating Warbler in a large and rather solitary woods not far from Berwyn, on June 1st, in company with Dr. W. E. Hughes, the notes of a bird unfamiliar to us both rang wildly from above the fern-lined banks of a small stream. Guessing its identity, I returned on the 3rd and spent from high noon until dark searching for its nest, wading the several branches of this little trout creek, until wet, bruised and tired I stumbled out of the gloom and tangle of the woods without the proof absolute of the breeding of the Louisiana Water Thrush within the borders of Chester county—*the nest*. Yet there can

be no doubt. The birds were present, running with incredible swiftness through the shallow water some distance in advance, flying up and down the dark, wooded ravines, or *chinking* uneasily from branch to branch, their tails in perpetual motion. I flushed the object of their solicitude from the rank undergrowth—a young bird but a few days out of the nest, which half flew half ran to a place of safety, followed by the parent birds.

That the Louisiana Water Thrush occurs in Chester county as a summer resident and breeder can no longer be denied.

FRANK L. BURNS, *Berwyn, Penn.*

BIRDS DECEIVED BY GLASS.

We have a "sun parlor," two sides of which consist of single panes of glass. At certain times of day these reflect sky, hills, trees and green fields, while growing plants on the inside, help the delusion of open space occasioned by clear glass. For some time after the room was built hardly a day passed that some bird did not dash against the panes, in some cases with sufficient force to break the neck; while in others the bird was only stunned, recovering on having water sprinkled on its head and being left in a dark place for some minutes, while others merely seemed shocked by the blow. One bird (it was killed) struck in such a manner that the impress of its little form was left on the glass in a fine dust as perfect as if drawn with a pencil. Robins, Linnets, Blue Jays, Hummingbirds and Wild Canarias did the same thing, all being deceived; but the strangest part of the story is that now they are all wiser. The birds are here in great numbers but for some months not one has attempted to fly through the glass. How have they warned each other?

E. A. HARVEY, *Santa Barbara, Calif.*

CAROLINA WREN (*THRYOTHORUS LUDOVICIANUS*) IN LORAIN COUNTY, OHIO.

It is with genuine satisfaction that I announce the capture of this hitherto elusive species in this county. There has seemed no good reason why it should not be native to the county, but it has been looked for in vain for ten years. Mr. L. M. MacCormick mentioned having

heard one prior to 1890, but without comment where and under what conditions. It remained for the bird to reveal itself in the famous Chance Creek gorge while we were camping there as late as the first week in September. The first morning out this wren's voice was conspicuous in the whole morning chorus. Later, on the 8th, I clinched the record by capturing one of the three birds for the College museum.

LYNDS JONES, *Oberlin, Ohio.*

FLICKER SKINS WANTED.

For the purpose of comparison I desire skins of any of the forms of *Colaptes* from all parts of the country. I will gladly pay transportation charges, and guarantee the return of the specimens in good condition. Write, or send the skins at once, to FRANK L. BURNS, *Berwyn, Pa.*

EDITORIAL.

Mr. Frank L. Burns is about completing his final report upon the Flicker and requests that any members or others who may have any additional notes or any matter not already sent in, favor him with them at an early date. Only those who have attempted the compilation of notes can appreciate the satisfaction which the reception of notes gives. This report promises to be even superior to the report on the Crow, making the most exhaustive treatise on the Flicker ever published. It will be as nearly a complete life history of the species as it is possible to make it. Send your notes to Mr. Frank L. Burns, Berwyn, Penn., as soon as possible.

The January issue of the BULLETIN will be largely or possibly wholly given up to a report on the Songs of the Warblers, which has been so long pending in the hope that more material might be contributed. It will attempt the description of the songs of nearly all the known species, with a statement of the song periods of as many as the material at hand will warrant. Descriptions of any of the songs of any of the warblers, and notes upon their periods of song will be welcome until the second week in December. Notes from the extreme north and from the extreme south are earnestly desired. Notes upon the western species would also

be desirable. Please give this matter of contributing to these reports your immediate attention.

The editor has felt for some time that a quarterly edition of the BULLETIN has many advantages over the bi-monthly edition. The larger number of pages would make a better looking magazine; it would afford a better opportunity for the composition and compilation of field notes and field work; and it would be less expense. Each issue would consist of not less than twenty-four pages, thus making the yearly output no less than with the bi-monthly edition. Second-class mailing rates would continue in force, so that the cost of mailing would be somewhat less, on account of the use of fewer envelopes and a less number of covers for the BULLETIN, not to mention the lessened work of addressing and mailing. The editor solicits comments from all interested upon the feasibility of issuing four instead of six numbers of the BULLETIN for the coming year, not decreasing the number of pages issued during the year.

The editor wishes to enlist every reader in the effort to increase the subscription list of the BULLETIN, and toward that end he will gladly send extra copies to any one who can use them to introduce the BULLETIN to friends or acquaintances. We must have at least 100 new subscribers before the close of the century. You can help to bring this about. Won't you do it?

ELECTION OF NEW MEMBER.

Mr. G. M. Allen, 44 Perkins Hall, Cambridge, Mass., is proposed for active membership. The Constitution provides that in the absence of adverse votes, which must be sent to the Secretary, the person proposed is elected to membership.

PUBLICATIONS RECEIVED.

Bird-Lore. Vol. I, No. 4.

Bulletin of the Cooper Ornithological Club. Vol. I, No. 5.

Bulletin of the New York State Museum. Vol. VI, No. 28. Plants of North Elba. By Charles H. Peck, M. A.

Bulletin 108, Ohio Agricultural Experiment Station.

Journal of Applied Microscopy. Vol. II, Nos. 8, 9.

Journal of the Elisha Mitchell Scientific Society. Vol. XIV, Part Second.

Maine Sportsman. Vol. VI, No. 72.

Museum, The. Vol. V, Nos. 10, 11.

North American Fauna. No. 15.

Oologist, The. Vol. XVI, No. 9.

Sportsman's Magazine. Nol. III, Nos. 8, 9.

WANTED! I wish very much to obtain the loan of skins of *Lanius ludovicianus* and *L. l. excubitorides* collected in the northern and eastern states. Expense of shipping and good care will be guaranteed. R. M. STRONG, *11 Mellen Street, Cambridge, Mass.*

WANTED! Keeler's Evolution of Colors, Newton's Dictionary of Birds, Vols. 3 and 4. Almost any of Thoreau's, Burrough's, Miller's, or Bolle's works, odd numbers Ornithological papers, skins of the Genus *Colaptes*. Can offer Davies' Taxidermy, set 10 Vols., Americanized Encyclopedia Britannica, '92, morrocco, 9200 pages; Maynard's Naturalists' Guide, etc., 100 numbers scientific papers, and possibly eggs, skins, or cash. Lists exchanged. F. L. BURNS, *Berwyn, Penna.*

ABNORMAL EGGS. More data and specimens wanted. Parties who have opportunity, the coming season, to take sets containing runts, extremely large, abnormally marked or unmarked, albino, or distorted eggs will do well to write me. I will pay cash or give good exchange for such. J. WARREN JACOBS, *Waynesburg, Penna.*

WANTED! I will pay cash for the following publications: *Curlew*, any and all numbers. *Ornithologists' and Oologists' Semi-Annual*, Vol. I, No. 1, Vol. II, No. 1. BULLETIN (new series) Nos. 1, 2, 3, 4. Copies must be unbound and in good condition. Address, LYNDS JONES, *Oberlin, Ohio.*

SOME WESTERN HORIZONS. III.

It is hard to realize that so complete a change in avifauna could take place between Julesburg, Colorado, and Green River, Wyoming. To be sure we had passed over "the mountains" during the night of May 17th. But if we were inclined to be disappointed at having missed the mountains we had our compensations—there were no mountains there. The gentle swell of land which represents the Rockies in Wyoming, along the Union Pacific tracks, is almost a dead level and practically barren. Along some stretches the land is absolutely destitute of vegetation, while the rest boasts only stunted sage. As we neared Green River the landscape broke up a little and we began to traverse little valleys of denudation in the deposits of the old Eocene lakes. At Green River station the erosion reaches its maximum development and "The Buttes," rising some 500 feet above the town, are really quite impressive phenomena. The "Green" River is brown and its branches are browner. Scarcely a bud had started and two days of our three day stay were practically nullified by the searching north wind which prevailed, bearing with it occasional skiffs of snow.

A chilly sortie was made into the stunted brush lying at the south edge of the town, and here most of the records were made.

THE GREEN RIVER HORIZON.

Spotted Sandpiper.
Mourning Dove.
Desert Sparrow Hawk.
Lewis' Woodpecker.
Say's Pewee.
Western Meadowlark.
Brewer's Blackbird.
Western Lark Sparrow.
Western Chipping Sparrow.
Mountain Song Sparrow.
Violet-green Swallow.
Bank Swallow.
Yellow Warbler.
Audubon's Warbler.
Western Yellow-throat.
Long-tailed Chat.
Catbird.
Rock Wren.
Russet-backed Thrush.
Western Robin.
Mountain Bluebird.

The next stop was made at Fossil, Wyoming. Here, alto our foremost thought was of ancient fish, the birds were not neglected. Fossil itself is the merest hamlet drearily situated near the union of Twin

Creek in a high valley of Western Wyoming. Patches of unmelted snow still dotted the valley and the surrounding hills. For the rest, the whole region had been closely cropped or "sheeped" by numerous flocks, and thus added desolation wrought in this alrealy barren land.

During our stay the sun shone kindly and the birds made the most of the meager fare afforded by creek and cliff. The creek was nothing but a spring run of snow water, sparsely clad with dwarf willows. The most uninviting clumps of willows, however, sheltered many birds, mostly, no doubt, in transit. The cliffs, on the other hand, were an imposing sight and their population was of a substantial sort. Prairie Falcons screamed loftily and Buzzards and Eagles showed themselves on occasion, while Sparrow Hawks filled up the interstices of vision. Along their frowning fronts many birds of prey were nesting. A pair of Golden Eagles, in particular, had chosen for their eyrie a cranny in the very middle of the wildest of the fossil-bearing cliffs, at this point some 300 feet high. The nest was practically inaccessible even by rope, for the cliff is perpendicular and deeply fissured, while the flying buttresses thus formed are ready to collapse at a breath.

The Falcons, (*F. mexicanus*), who have a nest in the "next block," persecute the Eagles unmercifully, and apparently for mere pastime. I saw one of the Eagles launch out from his nest for a course across the valley. Soon a Falcon spied him and took after him, though the Eagle had a big lead. "A race!" I cried. Woof, woof, woof, went the Eagle's wings, clip, clip, clip went the falcon's. Inside of a mile the smaller bird made up the distance, scratched his majestie's crown with his noble toes, and was up in the ether a hundred feet or so before the Eagle could do a thing. This operation was repeated until the gentle pair was out of sight across the checkered hills, but a few minutes later the Falcon returned to his nest, chuckling hugely.

The Prairie Falcon's nest was a tempting morsel but just a wee bit gouty. I worked over the face of the cliff till I could touch the bunch of sticks which marked the entrance to the cranny, but could not trust the surrounding rocks enough to make the final rise.

The horizon given below was taken between May 21st at 9 A. M. and May 23rd at the same hour, 1899.

THE FOSSIL HORIZON.

Least Bittern.
Spotted Sandpiper.
Mourning Dove.
Intermediate Sparrow.
Western Chipping Sparrow.
Brewer's Sparrow.

Marsh Hawk.
Ferruginous Rough-leg.
Golden Eagle.
Prairie Falcon.
Desert Sparrow Hawk.
Red-shafted Flicker.
Say's Pewee.
Western Flycatcher.
Cowbird.
Western Meadowlark.
Brewer's Blackbird.
Western Vesper Sparrow.
Sage Sparrow. (?)
Mountain Song Sparrow.
Cliff Swallow.
Barn Swallow.
Violet-green Swallow.
Yellow Warbler.
Audubon's Warbler.
Sage Thrasher.
Rock Wren.
Western Robin.
Mountain Bluebird.

REV. W. L. DAWSON, *Ahtanum, Wash.*

SOME FURTHER REMARKS UPON BACHMAN'S SPARROW (*PEUCÆA ÆSTIVALIS BACHMANII*) IN VIRGINIA.

In the first number of the present volume of the BULLETIN there is a short article relating to the occurrence of Bachman's Sparrow in Virginia. This article was based principally upon the specimens I took along Black-water creek, in Campbell county, Virginia, in May, 1897, when I found a pair nesting. These were the first birds of this species ever taken in Virginia. The only other northern record was the one taken by Mr. Figgins, which referred to a specimen taken in Maryland some years ago.

I now have the pleasure of recording the fact that the birds are even common in Albemarle county, Virginia. Several nests were found there by Mr. Barringer, who found the birds plentiful there in May and June. As this is a typical southern form it seems strange that it should go so far out of its usual habitat in Albemarle. Probably the species will be found abundant in many parts of the state if careful search is made. I think it will be found abundant both in Campbell and Albemarle counties.

JOHN W. DANIEL, JR., *Lynchburg, Va.*

BLACK VULTURE (*CATHARTES ATRATA*) IN VIRGINIA.

In the United States National Museum, there is an egg of the Black Vulture taken in Fauquier Co., Va., by my collector and sent to the Museum with a lot of *aura* eggs, but which upon first glance Major Bendire called *atrata* and labeled it as such. The collector said the bird's flight was peculiar, that he wondered at the time why it was that the vulture *sailed* so steadily and circled around so clumsily, but he did not know the Black Vulture and did not suppose it was other than *aura*. However, it turned out well. This is the first record for *Cathartes atrata* in Virginia, and I take pleasure in adding this species to the list of Virginia avifauna.

JOHN W. DANIEL, JR., *Lynchburg, Va.*

THE YEAR'S WORK.

Although it is an entire month before the close of the current bird-year, a brief summary of the work is made necessary by the special bulletins which will mark the new year. This early summary is made less premature by the unlikeliness of much more work during the remaining weeks. Any further records would therefore be rather accidental than as the result of a definite effort, hence the timeliness of the summary as marking the close of the year's activity.

The year has been marked by much greater activity than during any previous eleven months, with the logical result that more records stand to its credit. The year's records reach 182, against 175 during the whole of 1898, and a smaller number for any preceding year. Yet this large number does not include eleven species recorded in 1898, six of which might be expected with a considerable degree of confidence. But seventeen species not recorded in 1898 are on the list for 1899, one of them, Carolina Wren, being a new county record. Of the remaining sixteen two were recorded by Mr. W. L. Dawson before his departure. The writer's list therefore numbers 180, against 170 for 1898. Two of this number — Prairie Warbler and Wilson's Phalarope — were new to the writer, and eight — Shoveller, Black Duck, Red-breasted Merganser,

Lesser Yellow-legs, Greater Yellow-legs, American Osprey — were new to the Water Works Reservoir.

The work was confined to the six townships in which the greater part of previous work has been done, chiefly because they afford by far the most varied physical conditions, but partly because a perfect comparison with 1898 might be drawn. It is very doubtful whether other parts of the county would pay in results for the labor expended. The week spent in camp at the Chance Creek gorge illustrated what riches are in store for him who can spend the late summer weeks with the birds.

The county list now numbers 227 species, representing over twenty years of more or less active work upon the local bird fauna. During the last four years 198 species have been recorded. The number common to each of the four years is 122, and to each of the last three years 145. The experiences of the few years just past lead me to think that in this region about 130 species inhabit the county at some time during the year in sufficient numbers to make their record practically certain by one who is willing to put himself to some inconvenience to look for them. In addition to this number there are some sixty or seventy others which are not so regular or not numerous enough to be certainly counted upon during any one season. One must know their favorite resorts or the times when they are most likely to pass through the county if he expects to meet them.

He who would study the birds of his locality with the largest results must give careful heed to the weather, not merely for the day or for the week, but for the whole year. The daily weather charts are indispensible to the working field ornithologist. They enable him to predict the larger bird-movements with almost absolute accuracy, giving as they do, the sum total of the weather conditions over the entire country. And not less important, they enable him to plan his work intelligently, not merely hours, but for days ahead.

These yearly reports are printed in the Bulletin in the hope that the bird student who seems to himself to lack a field worthy of his effort and time, may come to realize that in every locality whatsoever there is room for much interesting and valuable work; that it is not needful that he should spend time and money in some apparently especially favorable place if he is to contribute something to our knowledge of birds. We need to work where we are and with what resources we have if the birds are to become wholly known.

Lynds Jones, *Oberlin, Ohio*

CAROLINA JUNCO (*JUNCO HYEMALIS CAROLINENSIS*) IN VIRGINIA.

On the summit of the "Peaks of Otter," Virginia, 6000 feet altitude, the Carolina Junco is a common summer resident, breeding in abundance there. The birds disappear early in the fall. I visit the summit often during the summer and nearly always they are present.

JOHN W. DANIEL, JR., *Lynchburg, Va.*

BROWN HERON (*ARDEA BRUNNESCENS*) IN CUBA.

I found this rare heron fairly common on the San Juan River near Matansas, Cuba, and after much stratagem and exposure, secured several specimens.

JOHN W. DANIEL, JR., *Lynchburg, Va.*

EDITORIAL.

As announced in the last BULLETIN, at least three issues of the next volume will be devoted to final reports of committees, each one constituting a "Special Bulletin" of twenty-four or more pages. An effort will be made to issue these quarterlies early in the month in which they would naturally appear, but from their special nature delays may occur. The editor hopes that in the event of delay you will not become impatient. The first of these reports will come from the Committee on Warbler Songs. The second from the Special Committee on Colaptes. The July issue will probably be devoted to General Notes, following the plan of the past few years. This number should be of unusual interest and value, being a summary of the work of the earlier part of the year. The fourth number will probably be a report upon special work on the Molting of birds, with special attention given to the details of molt in a few species. Considerable progress has already been made in this study, but many details remain to be carefully worked out.

In view of the special nature of the bulletins comprising the next volume, the price of the single numbers will be considerably increased,

but the subscription price will remain 50 cents if paid in advance. This rule will apply to members of the Chapter as well as to subscribers. Therefore members who are now in arrears will not receive the first number of the next volume until their assessments are received. The Chapter year closes in March, and therefore 1900 assessments are not due until then.

Our fellow member, Mr. John W. Daniel, Jr., will shortly leave on a special expedition for the Everglades of Florida, with the particular object in view of finding the nesting places of the Carolina Paroquette, Everglade Kite and Ivory-billed Woodpecker. We wish him every success in extending our knowledge of these rare species.

ELECTION OF NEW MEMBER.

Mr. James E. Gaut, Biological Survey, Department of Agriculture, Washington, D. C., is received into associate membership.

PUBLICATIONS RECEIVED.

North American Fauna, No. 16, by C. Hart Merriam.

The latest number of our North American Fauna gives the "Results of a biographical survey of Mount Shasta, California," representing the labors of Dr. C. Hart Merriam, Chief of the division of the Biological Survey, with his assistants, Messrs. Vernon Bailey, Wilfred H. Osgood, Walter K. Fisher, and Richard T. Fisher. Messrs. Henry Gannet, John H. Sage, and others visited the camp during the summer, rendering assistance.

A charmingly written account of the itinerary of the expedition is followed by a no less charming description of the physical features of Mount Shasta and its environments. The text is further illuminated by five full page plates of mountain scenery, and forty-five figures in the text still further bring before us the picturesqueness of the region and depict the plants and animals inhabiting its slopes.

A discussion of the life zones makes possible comparisons and contrasts with the Cascade range on the one hand and the Sierras on the other.

An inquiry as to the sources of the boreal faunas of Shasta reveals the fact "that, so far as the mammals are concerned, Shasta may be considered a part of Sierra," and that in spite of the fact that the distance across the Klamath Gap, which separates Shasta from the Cascades, is scarcely more than half that to the Sierra—but it is deeper.

The number closes with a systematic list of the mammals and birds of Shasta, where several new species and sub-species of mammels are described.—[L. J.

Notes on Birds from the Cameroons District, West Africa. By Harry C. Oberholser. From the Proceedings of the United States National Museum, Vol. XXII, pages 11–10. (No. 1180.)

The list of thirty-three species, collected by Mr. M. C. Bates, is accompanied with notes upon phases of plumage and remarks upon correspondence or contrast with other specimens of that or adjoining regions. No new species are described, but a new genus—Eurillas—is created "for the reception of the species commonly known as *Andropadus virens*."—[L. J.

A List of the Birds Collected by Mr. R. P. Currie in Liberia. By Harry C. Oberholser. From the Proceedings of the United States National Museum, Vol. XXII, pages 25–37 (with Plate VII). (No. 1182.)

The fifty-seven specimens collected represent thirty-nine forms, comprising two new genera and four new forms. The list is accompanied with more or less copious notes, chiefly upon color patterns in plumage. —[L. J.

Birds and All Nature. Vol. VI, Nos. 3 and 4.

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Book Reviews. Vol. VII, Nos. 7 and 8.

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Popular Science. Vol. XXXIII, Nos. 11 and 12.

Sportsman's Magazine. Vol. III, Nos. 10 and 11.

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